Pedagogy, Content Knowledge, Attitude, and Teacher Effectiveness of Physical Education and Sports Teachers in Fiji.

Final Synopsis submitted to Mangalore University for the award of Degree of Doctor of Philosophy in Physical Education

By

MOHAMMED FEROZ ALI
Research Scholar

Dr. PRASANNA B K
Guide
Assistant Director of Physical Education
Department of Physical Education
Mangalore University, Mangaluru

Department of PG Studies and Research in Physical Education and Sports
Mangalore University, Mangalagangothri -574199

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Declaration

I, **Mr Mohammed Feroz Ali** hereby declare the thesis entitled **"Pedagogy, Content Knowledge, Attitude, and Teacher Effectiveness of Physical Education and Sports Teachers in Fiji."** Submitted for the award of Doctor of Philosophy (PhD)in Physical Education is the outcome of the original work undertaken and carried out by me under the guidance of Dr. Prasanna B. K Assistant Director of Physical Education, Department of P.G studies and research in Physical Education and sports, Mangalagangothri.

I further declare that the same has not previously been found the basis for the award of any other diploma/degree /fellowship or any other similar titles of this or any other University.

Date: 25/07/22

Signature of the Investigator

Mohammed Feroz Ali

CERTIFICATE

This is to certify that **Mohammed Feroz Ali** has completed the research work titled **"Pedagogy, Content Knowledge, Attitude, and Teacher Effectiveness of Physical Education and Sports Teachers in Fiji."**

This is the Final thesis submitted to Doctoral Committee through Department of P.G studies and research in physical education and sports to Mangalore University, Karnataka, India, for the award of the Degree of Philosophy in Physical Education, which is based on the results of research work carried out by him under my guidance and supervision.

I further certify that this thesis or any part thereof has not formed the basis for any diploma /degree /fellowship or any other similar title, and the thesis represents independent work on the part of the candidate.

Date -26/07/22

Place: Mangalagangothri

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Signature of the Supervisor:

Dr. Prasanna B K
Assistant Director of Physical Education
Department of P.G studies and Research
in Physical Education and Sports
Mangalore University
Mangalagangothri, Mangaluru-574199

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Chapter I

1.0 Introduction

Education is both the acquisition and the achievement in skills, knowledge, beliefs, values and habits which shape the personality of a human being. Education must be holistic, and this means that the teaching instruction is concerned with the development of a person's mind, morality, enthusiasm, social graces, physicality, and creativity. A holistically developed person is physically fit, has intellect, is emotionally balanced, and is able to socially fit into society.

Teacher quality is essential to achieve holistic education. It is the most critical school-related influence that impacts learner accomplishment. The qualification of the teachers is one of the essential strengths of the Education Department of any government for the attainment of positive outcomes for student learning (Graber, 2001). Teachers should be efficient if students are to obtain the skills needed towards holistic development. An effective teacher who possesses a positive attitude would have a clear purpose to achieve advanced learning results related to the curriculum.

The experience and the qualification of the teachers play a vital part to reach the advanced learning results and assess the degree to which these results could be accomplished. These academic steps, of course, are characteristics of a viable education. This chapter examines the theoretical framework of the study parameters, the need, and reasoning for the research, the goals, and the hypotheses.

Significance of Teaching Physical Education in Schools

Human development consists of four significant domains. These are physical development, cognitive development, social-emotional development, and language development. Physical development is considered as developmental changes in the body and brain, including improvements in size and strength, incorporation of sensory and motor activates, and improvement of fine and gross motor skills.

Physical Education in Fiji

Like other developing nations in the world, Fiji's education system has been shaped by several forces. Fiji is an archipelago of over 332 islands located in the South Pacific Ocean among which 110 are inhabited by over 800 000 Fijians. However, the two larger islands, Viti Levu and Vanua Levu, host 87% of total population. Suva is the capital of Fiji, located on Viti Levu. The country's main source of income is Sugar cane and Tourism. Fiji is considered on e of the most economically developed nations in the South Pacific region.

Fiji enjoys one the highest literacy rates with 93% reported by A Secretariat of the Pacific Community Report in 1996. The education sector slowly evolved over the years. Currently there are about 871 ECE schools, 736 primary schools and 171 secondary schools funded by government and private institutions. There are 1422 ECE teachers, 6186 primary school teachers and 5576 secondary school teachers. 213 specialist Physical Education .Music/Art & craft (PEMAC) teachers that is 57 females, and 156 male teachers serve in secondary schools. 20% of these PEMAC specialists hold a degree and 80% hold diploma or certificate.

In 1972 to 1974 the Ministry of Education started a conversion course for the training of secondary school teachers in the three areas of physical education, art and craft, and music. In 1975 a one-year specialist conversion course started at NTC and roll on till 1980. Many of the PEMAC Teachers teaching in Junior and secondary Schools with Major and Minor in the three areas were trained at NTC under the one-year conversion course. The Physical Education Curriculum was therefore being taught in the main by those who have undergone a one-year specialist course and also by general teachers on the staff of each school with interest but with no specialist training.

The first Secondary Teacher Training Course for Physical Education, Music and Art and Craft (PEMAC) undertaken by the Ministry of Education, Youth and Sports leading to the Award of a Diploma in Education was conducted at Nasinu College in 1987 and 1988. However, the PEMAC course were offered as minor in teacher training programme. It was intended for the general teachers to deliver PEMAC curriculum from Textbooks developed by Curriculum Development Unit.

The first batch of PEMAC specialist graduated from Fiji College of Advanced Education in 2000 with Diploma in PEMAC. Since then, PEMAC has been offered in other tertiary education institutions and Teacher Training Colleges. Besides introducing new programmes and exposing teachers to a variety of activities, In service courses conducted also aimed at improving teachers' attitudes and understanding of the principles and philosophies behind the teaching of physical education. This course play an important role in the development and implementation of physical education in secondary schools.

Statement of the Research Problem

The study aims to explore Physical Education Pedagogical and Content Knowledge for teaching, Attitude towards Physical Education, and Teacher Effectiveness among Secondary School Physical Education and Sports Teachers of Fiji

Need and significance of the study

The study of pedagogical Content Knowledge, attitude, and its effectiveness on Physical Education and Teachers in secondary schools of Fiji was the main gist of this research; it showed new directions, unfold new insights, and is a vehicle to transfer knowledge, skills, and abilities in Physical Education and sports from the teachers to the students. This research is very much in line with the Ministry of Health and Medical Services' ambitions to mobilize people and improve health issues in Fiji. The Ministry of Health and Medical Services is urging young adults to participate in physical activity in efforts to curb the increase in mortality and morbidity trends from non-communicable diseases (NCDs). The ministry is looking forward to the possible good healthy habits and knowledge of physical activity is practiced during physical education class in secondary schools in Fiji,

Moreover, the teaching framework of physical Education and sports should be able to reason out the problem of declining health among youth as opposed to the overall inability of traditional physical education (PE) programs to adequately address this situation in the secondary schools in Fiji. The 2020 survey of the Ministry of health Fiji shows that Only 23.1% of women and 29.9% of men were within their healthy weight range according to BMI classifications. The amount of physical activity decreased with age across all areas, and around half of the surveyed participants indicated that they had no recreation (leisure) related physical activity. The most common health problems faced by the people were heart disease, respiratory disease, diabetes & cancers as the four leading NCDs. According to Dr. Temica Mitchell, Peace Corps Volunteer, acting as Physical Activity Officer at the Ministry of Health's Wellness Centre; "People do not fully realize the positive impact physical activity can have on managing health issues such as high blood pressure or high cholesterol as well as maintaining a healthy weight. People must move now in whatever way they can in to help normalize abnormal blood and better yet avoiding getting abnormal results in the first place".

Fiji's National Recommended Guidelines for Physical Activity from the Ministry of Health, adopted from the World Health Organization guidelines (2020), are: children (5 – 18 years) should have 60 minutes of play almost every day while adults (18 – 65 years) engage in 30

minutes of moderate exercise, at least five times per week. Children of this age attend primary and secondary schools in Fiji. This research focuses on secondary school teachers who are molding the students from age of 13- 18 years. Studies have found that differential teacher effectiveness is a strong determinant of differences in student learning, far outweighing the effects of differences (Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997; Jordan, Mendro, & Weerasinghe, 1997). Students assigned to several ineffective teachers in a row have significantly lower achievement and gains in achievement than those assigned to several highly effective teachers in sequence (Sanders & Rivers, 1996). The way teachers prepare and certification are by far the strongest correlates of student achievement (Darling-hammond, 2000). Thus, there is a need to find out if ineffective teaching by physical Education and sports teachers is a deterrent of good health among the secondary school students in Fiji. It was essential to find out if the qualification and the experience of teachers made a difference in pedagogical skills, which are used by the physical education and sports teachers are valid as there was no research found in that area by the investigator.

Furthermore, physical education of students in Fiji follows the traditional approach of teaching, whereby physical education concepts are taught the same way to all the students, despite the differences in students 'learning styles (Rink, J. 1979). A general lack of active performance in physical education class occurs in students if not guided by step by step procedures. One of the reasons teachers use the traditional approach of teaching physical Education might be a lack of pedagogical knowledge and teachers 'Attitude Towards the Teaching of Physical Education and sports (Alshammari 2004). The researcher found out the reasons for nonperformance in physical education and sports of the secondary school physical education and sports teachers in Fiji

This research reduced the gap in the research done by Dorovolomo and Hammond (2005), where he researched 21 physical education teachers where 11 teachers were from Suva and 11 were from Labasa Fiji. They used a qualitative approach in the research and found out that lack of equipment, insufficient time for Physical Education in the curriculum was one of the deterrent factors where teachers set back and did not take much interest in a physical education class. It was also evident that some teachers took much interest but needed to upgrade their qualifications. The above leads to another research where there is a need to study the content knowledge as teachers may have upgraded some of their qualifications since 2010 as Fiji National University has provided an in-service upgrade for physical education teachers and has offered the Degree program which was not offered in 2005 as mentioned by the researcher.

Furthermore, a study at the University of the South Pacific, named' Teacher Education for the Future,' showed that at that time, teachers in Fiji were under pressure to deliver results. A researcher in the study said that school constraints and the' top-down approach to curriculum development and curriculum development embraced by the Ministry of Education' discouraged them from being innovative (Tuinamuana et al., 2006). The research report notes that:' These constraints often compelled teachers to use' banking' pedagogy (transmission style of teaching) as opposed to more innovative and child-centered pedagogy in their preparation' (Tuinamuana et al., 2006, p. 334). The pressure of exams for other subjects may place physical Education as a non-examinable subject as a marginalized curriculum. The thesis provides information for the curriculum development service to improve the monitoring of physical Education in schools and to include physical Education and sports on the marks card for the students through a nationwide assessment.

Thus, there was a need to further research in the area of physical education and sports to see how teachers changed their pedagogical skills to investigate if there are changes in attitude towards the subject. There is a need to analyses the effectiveness of the qualified teachers in physical Education that is teachers having physical Education as a major in their area of study. The change would benefit the general health of the students and the community at large. The study will assist the Fiji National University in aligning the bachelor's in education physical education program as per the needs of the future teachers on the content knowledge and his pedagogical skills needed to teach.

Furthermore, the research would assist teacher training institutions in aligning the minimum education requirement (MER), and the procedures for the intake of physical education candidates for training in the institution as the research shows the need for having the right attitude of teachers towards Physical Education. It helped to find out an attitude-bearing mechanism that involves a logical dimension and a feeling component and a propensity of the teachers. The role of teachers at all levels is very critical for the development of the country. Teachers would, therefore, have a positive attitude towards the teaching profession (Sivakumar, 2019).

General Objectives of The Study

1. To compare teaching experience, teacher specialty and a teaching qualification with attitude towards Physical Education of secondary school Physical Education and sports teachers in Fiji.

2. To compare teacher effectiveness of secondary schools Physical Education and sports teachers concerning teaching experience, teacher specialty and teaching qualification.

3. To compare content knowledge of secondary schools Physical Education and sports teachers concerning teaching experience, teacher specialty and teaching qualification.

4. To compare pedagogical practice with teaching experience, teacher specialty and teaching qualification of secondary school Physical Education and sports teachers in Fiji.

5. To compare teachers' Physical Education practical class with teaching experience, teacher specialty and teaching qualification of secondary school Physical Education and sports teachers in Fiji.

6. To study the relationship between pedagogical practical and teacher effectiveness.

7. To assess the relationship between attitude towards Physical Education and Teacher Effectiveness.

8. To access the relationship between content knowledge and pedagogy towards teaching Physical Education and sports in Fiji.

9. To access the relationship between content knowledge and attitude towards teaching Physical Education and sports in Fiji.

10. To access the relationship between attitude towards teaching physical education and pedagogy in teaching Physical Education and sports in Fiji.

The Hypothesis of the Study

$H_{0.1}$ Physical Education and sports teachers having diplomas and degrees as a qualification do not differ significantly in attitude towards Physical Education.

$H_{0.2}$ Secondary school Physical Education and sports teachers under five years, 6-10 years, 11-15years, and more than 16 years of teaching experience do not differ significantly in attitude towards Physical Education.

$H_{0.3}$ Secondary school Physical Education and sports teachers under five years, 6-10 years, 11-15 years, and more than 16 years of teaching experience do not differ significantly in components of attitude towards Physical Education.

$H_{0.4}$ Specialist and non-specialist secondary school Physical Education and sports teachers do not differ significantly in attitude towards Physical Education

$H_{0.5}$ Specialist and non-specialist Secondary school Physical Education and sports teachers do not differ significantly in components of attitude towards Physical Education

$H_{0.6}$ Physical Education and sports teachers with different levels of teaching qualification have no significant difference in teacher effectiveness.

$H_{0.7}$ Physical Education and sports teachers having, Diploma and B.Ed. Qualification do not differ significantly in teacher effectiveness components while teaching physical education and sports in secondary schools of Fiji

$H_{0.8}$ Physical Education and sports teachers under 5years, 6-10 years, 11-15years, and more than 15 years of teaching experience do not differ significantly for teacher effectiveness while teaching Physical Education and sports in secondary schools of Fiji.

$H_{0.9}$ Physical Education and sports teachers under 5years, 6-10 years, 11-15years, and more than 15 years of teaching experience do not differ significantly for teacher effectiveness components in teaching Physical Education and sports in secondary schools of Fiji.

H_{10} Specialist and non-specialist Secondary school Physical Education and sports teachers do not differ significantly for teacher effectiveness in teaching Physical Education and sports in secondary schools of Fiji.

H_{11} Specialist and non-specialist Secondary school Physical Education and sports teachers do not differ significantly for teacher effectiveness components in teaching Physical Education and sports in secondary schools of Fiji.

H_{12} Secondary school physical education and sports teachers having, Diploma, and B.Ed. qualification do not differ significantly for pedagogy a theory and practical.

H_{13} Secondary school physical education and sports teachers having, Diploma, and B.Ed. qualification do not differ significantly for pedagogy, component's while teaching physical education theory and taking practical lesson in secondary schools of Fiji.

H_{14} Physical education and sports teachers under 5years, 6-10 years, 11-15years, and more than 16 years of teaching experience do not differ significantly for theory and taking practical in secondary schools of Fiji.

H_{15} Secondary school physical education and sports teachers under 5years, 6-10 years, 11-15years, and more than 16 years of teaching experience do not differ significantly for pedagogy component's while teaching physical education theory and practical in secondary schools of Fij

H_{16} Specialist and non-specialist Secondary school physical education and sports teachers do not differ significantly for pedagogy and its component's while teaching physical education theory in secondary schools of Fiji

H_{17}Specialist and non-specialist Secondary school physical education and sports teachers do not differ significantly for pedagogy

H_{18}There will be a significant relationship between secondary school Physical Education and sports teacher's content knowledge and attitude towards physical activity.

H_{19} There exists no significant relationship between teacher effectiveness and teachers' attitude towards physical education when teaching physical education and sports in secondary schools of Fiji

H_{20} There exists no significant relationship between teacher's content knowledge and Pedagogy towards teaching physical education and sports in secondary schools of Fiji

Delimitations

The following restrictions were delimitations that were self-imposed by the researcher. These delimitations were unavoidable due to the financial administration and time constraints.

1. The study will be delimited to Secondary school physical education and sports teachers who were selected through stratified random sampling.

2. The study will be delimitated to teacher's knowledge for teaching, attitude towards physical education, and teacher effectiveness.

3. Pedagogical knowledge of physical education and sports teachers will only be considered.

4. The Teacher Effectiveness of secondary school physical education Teachers was only considered not Teacher effectiveness for other subjects in secondary schools.

Limitations

1. The study will be limited to the content knowledge of the Fijian curriculum, the pedagogies skill needed to teach the Fijian curriculum only which cannot be generalized for other regions

2. The study will be imitated by the individual's motivations to fill the questionnaire fairly and honestly.

3. The study will be limited to secondary Schools Physical Education and Sports teachers of Fiji.

4. The study will be limited to Physical Education and Sports, only the other subjects which may be taken by the teachers will not be studied.

Operational Definition of the Terms

1. **Physical Education Content Knowledge for Teaching :**

Physical Education content knowledge refers to what knowledge of the Physical Education syllabi teachers teaching Physical Education have to teach the different levels in secondary school from Year 9 to Year 12 from the curriculum

2. **Attitude towards Physical Education and Sports**

Attitude towards Physical Education is the pattern of behavior or emotions associated with Physical Education and sports, which could be positive or negative appeal towards the subject. In the present study, attitude towards Physical Education refers to Fiji Secondary school's Physical Education, and sports teacher's attitude towards the teaching as a profession, child-cantered learning, teaching and educational process. Most importantly, the study focused on the teacher's attitude towards other teachers and the students.

3. Teacher Effectiveness

Teacher Effectiveness is critical in the teaching and learning process as it is the hub of all programs. However, it needs critical analysis and close observation.

4. **Pedagogy**

Pedagogy in this research will refer to the approach to teaching, based on the theory and practice of learning and how this process influences learning. The components for pedagogy in Physical Education are the teacher preparation, planning, classroom management of the teachers, teacher's innovation, teaching skills, and the execution of the total Physical Education and sports class for theory and practical. Pedagogy is how the teachers execute the lesson for Physical Education.

5. **Secondary Schools**

In the case of Fiji, the term secondary schools refers to schools having students from Year 9 to Year 13 students, including boys and girls within age limits (14 to 19 years) studying in secondary schools in rural and urban areas with a popular Fiji syllabus established by Curriculum Development Unit (CDU) of Ministry of Education.

6. **Specialist teachers**

Teachers who are trained physical education teachers in secondary school in Fiji , they either have a diploma or a bachelor's degree in physical education , art and craft or music known as PEMAC specialists in Fiji.

7. **Non-Specialist teachers**

These are teachers who take physical education and sports in secondary school in Fiji and do not have a major as physical education, these teachers either have a diploma or a degree majoring in the other areas but are taking physical education and sports along with other subjects in the school.

8. **Experience**

Experience is knowledge or skill gained in teaching Physical Education and sports, or any other academic subject because the teacher has been doing that job or activity for a long time. The range of teaching experience used for this research for include: 1-5 years, considered as beginners; 6-10 years, having fair experience; 11-15 years, well-experienced teachers; and over 15 years, very experienced teachers.

Chapter II

Review of the related Literature

Introduction

Analysis of relevant literature is one of the first phases in any investigation process. This is a helpful guide for identifying the issue, recognizing its importance, recommending promising tools for data collection, suitable design of the study and data sources (Bolderston, 2008)

A literature review lets a researcher get to know the problem of research and also provide suggestions to identify the best methods of study. The literature review offers an analysis of several studies with study structures, methods, samples, and results relevant to the researcher's title. The researcher can identify the missing research gaps and modify one's research to avoid repetition of the original idea of someone else by analyzing different research, while at the same time helping to justify the need to conduct specific research.

Approach towards Physical Education

Braksiek, (2022) researched on the "*Pre-service Physical Education Teachers' Attitudes towards Inclusive Physical Education*" to explore how Physical Education Teacher Education (PETE) programs shaped Physical Education teachers' attitude. the attitudes of instructors. The participants of the study were 362 German pre-service PE instructors from North-Rhine Westphalia, University in Germany. Data on teachers' attitude toward Inclusive Education as well as Inclusive Physical Education was analyzed utilizing SPSS 25. Two validities that is the factorial validity and the convergent validity of the PE-specific scale were evaluated using "Confirmatory Factor Analyses" (CFAs). The results demonstrated that the scale accurately evaluates attitudes toward inclusive PE and that these opinions are connected to broader attitudes about inclusive schooling. Furthermore, using multigroup CFA, the invariance of the attitude scale was used to determine the attitudes of pre-service PE instructors across all degree programs compared to PETE program.

Cruz et al., (2021) studied "*Physical Education Attitude of Adolescent Students in the Philippines: Importance of Curriculum and Teacher Sex and Behaviors*" students' attitudes toward Physical Education (PE) in Filipino middle school. The relationships between attitude and personal and external factors were correlated. The research included 659 middle school students ranging in age from 12 to 19 years (with mean of 14.55; SD of 1.14). Teenage students' cognitive, emotional, motivation level and behavior towards PE was assessed by using the

Physical Education Attitude Scale (PEAS). Pupils in middle school had moderate overall opinions regarding PE, according to the findings. When the PE instructor was male, female pupils had more positive opinions about PE. Whereas the males were happier with the PE upon having instructor of opposite sex. Females reported feeling comfortable in the PE lesson with the instructor of opposite sex. Finally, regardless of student gender, students' attitudes about PE did not deteriorate as they grew older. The results provide a new viewpoint on the subject and highlight the significance of interaction between teacher and students. Teachers should take care of the interactions with the same sex students to increase the positivity in attitude and behavior towards PE activities. The school leaders need to conduct Professional Development to enhance communication skills and teaching capabilities.

Studies related to Pedagogical Content Knowledge

Backman & Baker (2020) performed analytical research on "*Re-thinking Pedagogical Content Knowledge (PCK) for Physical Education Teachers – Implications for Physical Education Teacher Education*" to provide a novel viewpoint on the debate on PCK in Physical Education and PETE. The focus was to explore how PCK may be conceptualized 'phonetically.' The authors suggested that the context and situation influence the acquisition of the phonetic approach of the teachers and that PCK must be evident in teacher discourse. The authors highlight four important assumptions concerning PCK established in behavior analytic research in PETE. Firstly, Physical Education instructors must be equipped to conduct the PE activities to teach rules and skills. Secondly, they must be equipped to spot faults and work out progression plan with skills teaching. Thirdly, Physical Education instructors should be able to choose, adapt, and provide feedback on suitable assignments. Physical Education instructors' CK and PCK levels may be quantified. The authors proposed that PCK may also include integrating new knowledge in the social context, understanding the students' dynamics, consciousness of the diverse range of students, developing a sense of morality and managing the risks in PE.

(Meier, 2021) analyzed "*Pedagogical Content Knowledge in Students Majoring in Physical Education vs. Sport Science*" as the two topics are mostly mistaken and seen as one subject but Meier in the research has stated that Pedagogical Content Knowledge (PCK) is a particular characteristic that provides the instructor with expertise to change information on how the learners can comprehend. The change is important in Physical Education, as it is fundamentally distinct in various aspects when compared to other subjects in school. The distinctiveness lies

in the fact that the educational goals in PE as a subject is achieved by engaging in physical activities. Investigation is paramount to explore the relevance of PCK to sports science. PCK studies in Germany is in its early stages, so a survey of 622 students was done to study possible disparities in education programs (where PE Teacher in Education were 431, and sport science teachers were 191). To stress that latent mean scores could be compared effectively across groups, multigroup confirmatory factor analysis models was used to assess measurement invariance (MI). The M1 continual assessment reveals that it is feasible to evaluate PCK-related factors with PETE and sport science students. In instruction category PETE students did better than sports science students. In student category, the sports Science students did better than PETE students. It is apparent that previous PA expertise is only advantageous for high rating in the "teaching" category. Thus, the research gives the perspective of PCK around sports science.

Curriculum

Belton et al., (2022) study in Ireland, on Physical Education taught Wellbeing program in the three years of second level (12-15 years). In any program, the purposes and objectives must be met. Y-PATH PE4Me is offered as an underlying curricular model to act as an acceptable and beneficial direction to assist in the implementation of second level. PATH PE4Me seeks to help students live an active and healthy life. This model was made possible by employing pedagogies to foster a self-directed motivating environment and sustaining focus on achievement of learning outcomes. The advantage is that the model helps develop positive attitudes and motivates toward physical activity, provides knowledge on health and creates awareness on health and well-being, and emphasizes in main skills for movement. The Y-PATH PE4Me approach provided a systematic framework for guiding well-aligned educational choices toward the aims and philosophy of wellbeing-aligned PE.

Wang & Chen, (2022) conducted a literature study to explain the patterns of current study on Physical Education curricular intervention strategies to assess their effectiveness. They used a pre-determined procedure to identify, find, filter to conduct an analytical research on PE curricular interventions. The review was place between 1995 and October 2021. The method resulted in 48 publications that matched the inclusion criteria to meet the study objectives. Cohen's d was used to measure the regularity of the intervention in the researched outcomes. The findings revealed that most regular outcomes of research in physical activities included "body composition, physical fitness, motor skill competence, knowledge and cognition, and

well-being and social competence". This study found a rising trend in PE research on curricular intervention strategies from 2009 to 2021 (with 36 studies) in comparison to the previous decade (with 12 studies). Many of the research on PE included a control group (41 studies used this method), of which 23 were carried out in North America but 15 were done in Europe. These publications of these research are in health (19 studies) and kinesiology (18 studies) journals. The overall impact of all results of intervention were minor to medium (d = 0.24). Individual impact estimates for the outcome were given. The patterns and intervention effectiveness results may be valuable in designing, implementation, and assessing future PE curricular initiatives.

Teacher Effectiveness

Behera, Mukherjee, & Behera (2019) in their study titled "Assessment of Teacher Effectiveness of University Teachers in Purulia District of West Bengal." A Survey method was involved. A total of 130 Sidho-Kanho-Birsha University teachers and students in the district of Purulia (50 teachers and 80 PG students) were taken as representative samples of the entire population. Stratified Random sampling methodology was used to pick the population of the institution. The research tool used was the Teacher Effectiveness Scale (TES), which was used to measure the effectiveness of faculty teachers, and the Teacher Rating Scale (TRS) created by Deva (2003) for students measured the effectiveness of faculty members. The data analysis was done using F and t-tests. The findings revealed that the level of teacher effectiveness of University Teachers in Purulia district of West Bengal was Moderate to average or moderate. Furthermore, the study also revealed that the level of teacher rating of University Teachers in Purulia district of West Bengal was average or moderate. The findings revealed that teacher effectiveness concerning their gender, locality, training status, types of job, marital status, salary income, caste, and the stream did not differ significantly. On the other hand, the level of teacher effectiveness concerning their teaching experience, Self-reported and Students-rated differed significantly.

T. A. Lynch (2019), in the study titled "Examining Teacher Perceptions Of The Stronge Teacher Effectiveness Performance Evaluation System," A hybrid process test analysis was conducted to collect and interpret evidence from teachers that were assessed and analyzed using the Teacher Effectiveness Quality Assessment System. Evidence was obtained using a sample method for which an e-mail invitation was sent to 378 teachers, 108 of whom responded to the e-mail, and participated in the survey. Out of 108 teachers, 13 chose to be interviewed.

Triangulation was used to provide authenticity to the results by coding data using marks to define common themes, which was the most suitable way to organize data for the study. Participants did not know that the curriculum could bring about change in either teaching or student achievement. Participants claimed that the method used by officials was for bureaucratic purposes rather than a genuine effort to improve school learning, because teacher training needed to shift from a completely evaluative one to an emphasis on classroom oversight and professional development. The study showed that there was a need to create a correlation between observations, evaluations, and opportunities for professional growth.

Erturan Ilker & Asci (2019) studied "the role of Teacher's Feedback in Physical Education (PE) in evaluating the relationship between students ' perceptions of motivational environment Using convenience Sampling A total of 835 middle school students engaged willingly in the cross-sectional data collection of Denizli universities. The Perceived Teacher Feedback Scale (Koka & Hein, 2005) was used to measure students ' expectations of the type of feedback they got from their PE teachers. The findings showed that PE was seen as a lesson where students were unable to see tangible evidence of their academic success until they got input from their teachers, which could contribute to a lack of development in these specific learning fields. As performance input information is given to students linked to each part of their movement patterns, learning more about their performance progress may improve the student's preferred process to show high skills.

Importance of Physical Education

(**Morgan & Hansen, 2018**)**,** in the study titled *"Physical Education In Primary School Classroom Teachers' Perceptions Of Benefits And Outcomes,*" examined the beliefs of classroom teachers about the advantages and consequences of their Physical Education services. For the Cross-sectional study, a mixed-mode methodology integrating semi-structured interviews was used. Results showed that Physical education teachers provided a platform for children to improve health. Furthermore, it had a positive impact on classroom learning and behaviour, which helped children improve student's way of interaction with other people in their community. Physical education and sports also encouraged some children to experience success in a specific learning environment. Education programs have only been efficacious in attaining results related to overall physical activity, self-efficacy, gross and fine motor skills, and the general wellness. Educators agreed that PE was conducive to physical activity as a tool and had a positive impact on classroom learning and behaviour.

Chapter III

Research Methodology

Research Design

Research design gives an overview of the research process of the study, thus giving a sense of direction in the collection and analysis of data, keeping in mind the objectives of the thesis. The current study used descriptive design and a systematic sample using stratified random samples from each stratum of the four main education divisions in Fiji, providing the researcher the ability to provide data to demonstrate the aims of the research.

Descriptive Design

Descriptive research also referred to as statistical research, is a kind of current state of the phenomenon under consideration. The concept behind this method of analysis is to analyse average frequencies and other mathematical calculations. Although this research is very accurate, it does not determine the cause and effect behind a situation, nor does it make any predictions. The primary purpose of the descriptive research study "according to (Jackson. S.L, 2009) to list or depict the characteristics of the capacity, behaviour or opinions of subjects to define, by words or quantitative values, the status of a group, of an institutional structure or other facilities, or to depict trends or changes in the characteristics of human beings or objects." This kind of research is done when a researcher wants to gain a better understanding of the subject, such as the attitude of physical education teachers towards physical education. So use the questionnaire to measure the attitude. Systematic research includes polls and panels, as well as the application of cluster sampling. Descriptive research is used to describe the characteristics of the population being studied. It is an exploration of certain existing phenomena.

Population

The population is the broader group of people to whom the findings would refer. A sample community is usually a broad collection of individuals or objects that is the focus of a scientific inquiry. However, because of the large population numbers, researchers are often unable to study every person in the population because it is too costly and time-consuming.

As per the 2017 statistics in the Annual Report of Ministry of Education Fiji, there are 175 Secondary schools in Fiji; These secondary schools are in nine districts, which are divided into four divisions, as shown in the table below. There are 213 physical education specialists in the country out of which 57 are females and 156 are males .44 teachers have a degree (10 female and 34 males) 165 teachers have A Diploma in Education (46female and 119male) and there are 4 teachers with a Certificate (1 female and 3 males). There is other teachers' part from qualified physical education teachers taking the subject in Fiji who constitute as the population of this study that is specialist and non-specialist physical education and sports teachers .

Fiji has a total of 173 Secondary Schools, which include government and nongovernment schools. From the population of 750 Physical Education and Sports Teachers, 254 Physical Education and Sports teachers were selected as per Krejcie and Morgan (1970) sample size table. The sample selection table is formed form the formulas of sample size calculation produced by Morgan and is widely used in research throughout the world . Stratified sampling was used to pick teachers randomly using the draw method as per the percentage allocated to each stratum from 254 teachers, as per the population of each stratum from 4 Major Education Divisions that are Northern, Central, Western, and Eastern. The researcher was not able to balance males and females as there were more male physical education and sports teachers than females, as shown in the table below.

Tools used in the study

Variables	Name of the tool	Developer
Pedagogy	A rating scale for pedagogical skills	Mohammed Feroz Ali DR. Prasanna. B. K
Content Knowledge	Test for content knowledge in physical education and sports	Mohammed Feroz Ali DR. Prasanna. B. K
Attitude towards physical education	Physical Education Teacher attitude inventory	Mohammed Feroz Ali DR. Prasanna. B. K
Teacher Effectiveness	Teacher effectiveness scale	Santosh Dhar, Dr. Upindhar Dhar (2017)

Validity and reliability of tools

Content validation is the method of determining the representativeness of subjects relevant to the realm of expertise, tasks, and information for whatever is being evaluated (Sirec, 2020). Thus, The tools used in the research was developed and presented to a panel of experts to

determine the representativeness of the items. The panel consisted of members from different countries such as Fiji, India, and Saudi Arabia as experts in the field of Physical Education. A letter requesting validation was sent to different experts in the field to validate the tools. When accepted, the validators went through each element, as described in the objectives of validation.

The panel of validators had to validate the tools based on the following criteria listed Below.

- The layout and presentation of the tool
- Suitability of the content chosen.
- Appropriateness of the questions or statements
- The level of the questions.
- The subjects of the tools
- The overall appearance of the test in measuring
- The way the questions are presented
- The fairness of the statements.

Preparation of the tools

Content Knowledge

Phase 1: Preparation of the first draft

Initially, a roadmap was drawn up describing the aspects of secondary school physical education Syllabus from the blueprint; ninety multiple-choice questions were drawn up, 30 questions from each aspect. The questions were given to the guide, who provided feedback such as formatting, questioning systems, clarification of questions, questions related to the blueprint, and the curriculum.

Step 2: Preparation of the second draft

Modifications to the Test Paper was done following consulting with guided. The updated test physical education content knowledge of physical education was resubmitted to the study guide for confirmation. The test was ready for the first stage of verification after receiving the approval of the guide.

Step 3: Validation of the tool.

The validators provided the following feedback on the questions.

(i) Re-adjustment of questions to its right aspect

(ii) The crossing of similar questions

(iii) Rephrase vague questions

(iv) Destructors need to be well-distributed

(v) Involve application questions that stimulate thought.

There was a conversation with the validators, then further consultation with the Study Guide, modifications were made to the questions. There were 60 questions left for further testing to the next stage.

Preparation of Final Draft

As an accepted practice, researchers conduct a pilot test before proceeding with the final test to check the suitability of the research instrument (standard research questionnaire). Thus the test was given to 60 physical education and sports teachers in Fiji who were not part of the sample. Once the test was done, the researcher performed item analysis using excel and SPSS for quality assessment with the following objectives to select related items for the final draft.

- To obtain the Difficulty Value (D.V) data for all items.
- Providing discriminatory power (D.I) to discriminate between competent and less qualified investigates for information
- To provide for the modification to be made in some of the items
- Prepare the final draft correctly (easy to delicate items)

Ebel and Frisbie (1991) have provided the techniques and procedures most frequently used in research for the objective type test item analysis.

Quality assessment of multiple-choice questions (MCQ) is referred to as "item analysis." Item analysis enables the identification of sound quality issues for the assessment of content knowledge of physical education and sports teachers based on their Difficulty Index (DIF I / P), Discrimination Index (DI), and Distractor Efficiency (D.E.).

The Difficulty Index helps to determine whether the MCQ is too easy or too challenging to attempt; the Discrimination Index (DI) helps to differentiate between high-capacity and low-

capacity subjects. At the same time, the Distractor Efficiency Index (D.E.) highlights whether the distractors, i.e., alternative to the correct answer, are effective or ineffective.

The researcher analyzed the Draft Content Knowledge for Physical education and sports teacher's multiple-choice scores for the calculation for the difficulty Index and the discriminating power of each item. The researcher entered each response of the teachers from the pilot study on a spreadsheet. Furthermore, the marks were arranged in descending order of the overall score. The highest 27 percent and the lowest 27 percent overall score. The researcher looked at each score sheet at the upper and lower levels and found the respondents in both groups who answered each item correctly. The scores of the two clusters were used to estimate the difficulty value and the discriminating power of each item using the procedure suggested by Susan Matlock-Hetzel (1997). Assessing the difficulty of the item: The difficulty index (D.I) for each item was calculated using the formula,

Difficulty index or P-value using formula

$DI = H + L/N \times 100$

H - Number of students answering the item correctly in the high achieving group

L- Number of students answering the item correctly in the low achieving group

N = Total number of students in the two groups (including nonresponses)

Discriminating Power

The power of discrimination is a primary measure of the validity of an item. It is a measure of the capacity of an item to discriminate between those who scored high on the overall test and those who scored low. Blood and Budd (1972) The formula for the measurement of discrimination on the element is given below.

DP = (R.H - R.L)/ (N.H or N.L)

DP – Discriminating power

• R.H – rightly answered in the highest group

• R.L - rightly answered in the lowest group

• N.H – no of examinees in the highest group

• N.L - no of examinees in the lowest group

The table below shows the general guidelines for difficulty index which was created by Charles D. Hopkins, Richard L. Antes (1985) as a general norm for acceptance

Index	Difficulty	Discrimination
86 above	Very Easy	To be discarded
71 – 85	Easy	To be discarded or revised
30 – 70	Moderate	Very Good items
15 – 29	Difficult	To be discarded or revised
14 below	Very Difficult	To be discarded

Based on the over-mentioned range of acceptance and rejection, the investigator used the statistics and confirmed 30 questions. Out of 60 questions with difficulty indexes ranging from 30 to 70 perfect. The discriminating power above 0.25 was used for the final selection of questions. The final Content knowledge for physical education consisted of 30 items of content knowledge.

Test Reliability

The reliability of the tool as physical education Content Knowledge for Teaching 'was calculated using Cronbach's alpha and the reliability index was 0.90 which indicates an excellent reliability

Physical Education Attitude Scale

Based on the Ecological Model,(Sallis and Bauman 2012) the Physical Education Attitude Scale (PEAS) items were generated from a comprehensive review of interpretive and empiric literature to measure secondary school's physical education and sports teachers attitude The scale consists of 36 statements which were validated for reliability and validity. The phase for the construction of the tool is mentioned below.

Phase I: Selection of the Area

The attitude scale of secondary school physical education and sports teachers was developed after analyzing literature and using the Ecological model. The researcher drafted the tool using three perspectives, namely, Teachers' Attitude towards learning physical Education (ALPE), how passionate the teachers are towards physical education (PTPE), and Teachers Attitude towards Teaching physical education (ATTPE).

Phase II: Writing of the Items

Initially, the investigator prepared 80 statements that were submitted to the Study Guide for review.

Phase III: Preparation of the initial draft

Preparation of the first draft of the scale was done implementing suggestions, from the guide which reduced the number of items to 60, and the classification using Likert scale (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree was calculated using the guide's suggestions.

Phase IV Validation and pilot study of the tools

Content validation of the tool was done by the experts in the filed as for the content knowledge tool. The validators improved the sentence structure and suggested removing ten questions, which they thought was not appropriate. The suggestions were further discussed with the guide, and we agreed to have 36 questions for the Piot study. The 36 questions on the questionnaire were piloted with 60 secondary school's physical education and sports teachers. The results were analyzed with Statistical Package for the Social Sciences (SPSS) for the reliability.

Reliability of the Tool

The reliability of the tool Rating Scale for Teachers' Attitude Towards physical education was calculated using Cronbach's alpha, at a reliability index of 0.838, indicating excellent internal consistency in the responses. All the 36 questions which were validated by the team had an alpha over 0.8. The reliability of each question is shown in the appendix XXXX.

Scoring Procedure:

As per the rating on the Likert scale, the sum of these values gives the physical education teacher-a core for the attitude. The total score varies from 36 to 180, showing the teachers with highest to lowest attitude towards physical education

Steps for preparation of Attitude / pedagogy and teacher effectiveness Scale

Based on the suitable models of each tool and literature the Physical Education Attitude Scale ,teacher effectiveness scale and Pedagogy Scale were generated from a comprehensive review of interpretive and empiric literature to measure secondary school's physical education and sports teachers attitude, pedagogical skills and effectiveness The attitude scale consists of 36 statements , the pedagogy theory 24 questions , pedagogy practical has 29 questions and the teacher effectiveness had 36 questions has which were validated for reliability and validity. The phase for the construction of the tool is mentioned below.

Phase I: Selection of the Area

The researcher drafted the tools using different perspective or sub areas for the tool

Teacher attitude: Teachers' Attitude towards learning physical Education (ALPE), how passionate the teachers are towards physical education (PTPE), and Teachers Attitude towards Teaching physical education (ATTPE).

Teacher effectiveness: knowledgeable, transparent, learning-oriented, the helpful motivator is dependable and analytical.

Pedagogy theory: Introduction and Implementation of Lesson (IIL), Assessment and Feedback (AFB), Student/Class Management (CM) and Time Management and Conclusion (TMC)

Pedagogy Practical: Introduction, preparation, safety, and warm-up, Development of lesson, teaching skills and techniques, and conclusion and cool down.

Phase II: Writing of the Items

Initially, the investigator prepared a number of questions for which tool as statements that were submitted to the Study Guide for review.

Phase III: Preparation of the initial draft

Preparation of the first draft of the scale was done implementing suggestions, from the guide which reduced the number of items for each scale , and the classification using Likert scale (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree was calculated using the guide's suggestions.

Phase IV Validation and pilot study of the tools

Content validation of the tool was done by the experts in the filed as for the content knowledge tool. The validators improved the sentence structure and suggested removing some questions, which they thought was not appropriate. The suggestions were further discussed with the guide, and we agreed to have 36 questions for Teacher attitude , 36 questions for Teacher effectiveness , 24 questions for Pedagogy theory, and 29 questions for Pedagogy practical questions for the Piot study. The questionnaire were piloted with 60 secondary school's physical education and sports teachers. The results were analyzed with Statistical Package for the Social Sciences (SPSS) for the reliability.

Reliability of the Tool

The reliability of the tool Rating Scale was calculated using Cronbach's alpha, at a reliability index of 0.8o and above, indicating excellent internal consistency in the responses. All questions which were validated by the team had an alpha over 0.8.

Scoring Procedure:

As per the rating on the Likert scale, the sum of these values were calculated for general attitude , effectiveness and pedagogy but for the components the questions were grouped and analyzed separately using the sum scores

Statistical Techniques Used

Statistics include the process of collecting, processing, classifying, tabulating, reviewing, displaying, and explaining the data collected with the highlighted subject matter (Bhandarkar2014). In this analysis, the conclusions were evaluated by analysing the data using correct, concise, and inferential statistics.

The mean and standard deviations for the various variables in this sample were used for descriptive statistics. The mean is helpful when comparing two or more people and is widely used in research, and the Standard Deviation is the most precise measurement of the deviation.

For inferential statistics, A t-test was used to determine if there is a significant difference between the means of two groups for more than two groups that is for the components of the tools, one-way analysis of variance (ANOVA) was used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups. Furthermore, Post-hoc, analysis was used to explore differences between multiple groups means. Whereas the f table was used to measure the degree of freedom. The statistical significance level was set at alpha equal 0.05, and the Social Sciences Statistical Software (SPSS) version 27 was used to analyse the data.

Ethical considerations included ethical approval from Ministry of Education Fiji voluntary participation, informed consent, fairness and trust, secrecy, and confidentiality.

Chapter IV

Analysis of Data and Results of the Study

4.01 Analysis and Interpretation of Objective 1

To compare teaching experience, teacher specialty and a teaching qualification with attitude towards Physical Education and sports teachers in secondary schools in Fiji.

A series of statistical analyses were applied to make inferences from the present study. Independent t-test, one-way ANOVA and Post-hoc results are provided in the tables.

Moreover, the Statistical Package for the Social Sciences (SPSS) Version 27 was used to do the statistical analysis. Wherever F value was found significant, the Least Significance Difference post hoc test (Ronald. A. Fisher) was conducted for mean comparison.

Table 4.1.01- Demographic characteristics of the participants (N=254)

Variable	Component	Characteristics	Mean	SD	N (%)
Qualification	ALPE	Diploma	40.51	8.34	Dip. -76 (19%)
		Degree	29.24	9.92	
	PTPE	Diploma	48.78	10.39	Deg. -178 (81%)
		Degree	35.65	11.43	
	ATTPE	Diploma	44.13	8.94	
		Degree	29.11	11.50	
Experience	ALPE	< 5	2.39	0.89	< 5- 22%
		6 - 10	2.68	0.93	6-10 - 30%
		11 - 15	3.37	0.87	11 -15 - 28%
		> 16	3.45	0.82	> 15 - 20%
	PTPE	< 5	2.58	0.83	
		6 - 10	2.77	0.91	
		11 - 15	3.41	0.95	
		> 16	3.44	0.90	
	ATTPE	< 5	2.19	0.90	
		6 - 10	2.54	1.05	
		11 - 15	3.20	0.94	
		> 16	3.29	0.98	
Teacher type	ALPE	Specialist	3.886957	0.451439	Specialist 45 % non-specialist 55%
		Non-Specialist	2.201439	0.545319	
	PTPE	Specialist	3.967893	0.533521	
		Non-Specialist	2.280576	0.446318	
	ATTP	Specialist	3.794203	0.472865	
		Non-Specialist	1.977818	0.629279	

ALPE--- "Attitude towards learning Physical Education; PTPE-- Passionate teachers towards Physical Education; ATTPE - Teachers Attitude toward teaching Physical Education" (Ali and Prasanna, 2019)

Table 4.1.01 reflects the demographic characteristics of the study participants on the attitude. The participants constituted of 81% teachers with degree qualification, and 19 % teachers with a Diploma in Education majoring in Physical Education. Furthermore, 22 % of the participants have less than five years of teaching experience, 30% had teaching experience of 6-10 years, 28% had experience ranging from 11-15 years in teaching, and 20% had more than 16 years of secondary school teaching experience in Physical Education and sports in Fiji. Data were also analysed for teacher type in Physical Education. In Fiji, there are Physical Education specialists known as physical Education Music and Art & Craft (PEMAC) teachers who specialise in teaching Physical Education. They have done their Majors in Physical Education and Art and craft or Music. PEMAC is also taken by teachers who are teaching other subjects in secondary schools. For this research, we have named them non-specialist teachers. There were 45 percent specialist and 55 percent non-specialist teachers for this study. This ratio of specialist and non-specialist teachers is a result of each school secondary school in Fiji having at least one PEMAC specialist.

Percentage of Level of Attitude of teachers in Fiji's secondary schools towards Physical Education and sports

Table 4.1.02- Norm Based Grading (N=254)

Attitude group	N (%)	Mean	SD
Unfavorable	23 (9.1%)	53.70	6.752
Moderate	130 (51.2%)	85.77	16.379
Favorable	101 (39.8%)	143.42	10.660

Results from Table 4.1.02 show that more than half of the participants of the study have a moderate attitude towards Physical Education and sports. It has been alarming to note that only 39.8 % of the teachers showed a favourable attitude towards Physical Education. Adu and Olatundun (2018) found that teachers' characteristics affect students' performance in secondary schools. Their research found that teachers' positive attitudes positively influenced students' personalities and life outcomes. Teachers must demonstrate excellent attitudes in teaching to transform good attitude towards learning in the students towards any subject (Fehintola, 2014). Positive attitude is crucial in implementing curriculum related to key learning areas such as Healthy Living and Physical Education.

Analysis and Interpretation of Data to test Hypothesis on Attitude Towards Physical Education and sports in relation to the qualification of the teachers

Table 4.1.03- t-test results comparing attitude towards Physical Education and sports in relation to the qualification of teachers

Group	N	M	SD	t	P
Degree	178	93.99	31.49	9.703	0.003*
Diploma	76	133.42	25.8		

***Significant at 0.05 level**

It is evident from Table 4.1.03 there is a significant difference in the attitude of teachers with degrees or diplomas. The p-value is 0.003, which is less than the significance value of 0.05 reflects the significant difference. Therefore, the alternative hypothesis is accepted. The teachers with diploma qualification had a higher mean showing better attitude towards Physical Education and sports. The t-value of 9.03, which is far away from 0, indicates greater evidence against the null hypothesis. T-value reiterates the existence of significant difference in the teacher attitude. The teachers with diplomas had a higher mean for attitude towards Physical Education. The reason for the higher mean is that teachers with a diploma qualification are specialist teachers.

Analysis and Interpretation of Data to test Hypothesis on Components of Attitude Towards Physical Education and sports concerning Qualification

Table 4.1.04- Analysis of Variance of components of attitude towards Physical Education and sports Related to the qualification of the teachers

		Sum of Squares	df	Mean Square	F	p
ALPE	Between Groups	55.978	1	55.978		
	Within Groups	187.083	252	0.742	75.402	0.000*
	Total	243.061	253			
PTPE	Between Groups	54.286	1	54.286		
	Within Groups	184.826	252	0.733	74.016	0.000*
	Total	239.112	253			
ATTPE	Between Groups	83.494	1	83.494		
	Within Groups	204.275	252	0.811	103.001	0.000*
	Total	287.770	253			

***Significant at 0.05 level**

ALPE--- "Attitude towards learning Physical Education; PTPE-- Passionate teachers towards Physical Education; ATTPE - Teachers Attitude toward teaching Physical Education" (Ali and Prasanna, 2019)

Table 4.1.04 shows the three components of teacher's attitude towards Physical Education. The F-value of ALPE is 75.4, PTPE is 74.0 and ATTPE is 103.0. However, the p-value of ALPE, PTPE and ATTPE is 0.000, which shows a significant difference in all three components. Thus,

the alternative hypothesis is accepted for ALPE, PTPE and ATTPE. The results reveal how passionate teachers are for learning Physical Education and sports. The results show the passion differs significantly in the teacher attitude. The results further show teachers with a diploma are more eager to teach Physical Education and sports.

Analysis and Interpretation of Data to test Hypothesis on Attitude Towards Physical Education and sports in relation to teacher's experience

Table 4.1.05 Analysis of Variance of Physical Education and sports teachers related to experience

Source of variation	D.F	SS	MSS	F	P
Between the group	3	55778.317	18592.772		
			18.689	0.00	
Within group	250	248708.202	994.833		

Table 4.1.05 shows a significant difference found among the four selected experience categories of Physical Education and sports teachers in this study. These experience categories were under five years, 6-10 years, 11-15 years, and more than 16 years of teaching experience. The F-value is 18.6, which is less than the tabulated F(3.56); thus, the alternative hypothesis is accepted. The result shows that the more experienced teachers have a better attitude towards Physical Education and sports than less experienced teachers.

Analysis and Interpretation of Data to test Hypothesis on Components of Attitude Towards physical education and sports concerning teaching experience

Table 4.1.06- Analysis of Variance on Components of Attitude of Physical Education and sports teachers in relation to teaching experience

		Sum of Squares	df	Mean Square	f	p
ALPE	Between Groups	5794.52	3	1931.51	20.447	0.000
	Within Groups	23615.89	250	94.46		
PTPE	Between Groups	5883.70	3	1961.23	14.201	0.000
	Within Groups	34526.23	250	138.10		
ATTPE	Between Groups	7134.64	3	2378.21	17.332	0.000
	Within Groups	34304.20	250	137.22		

***Significant at 0.05 level**

ALPE--- "Attitude towards learning Physical Education; PTPE-- Passionate teachers towards Physical Education; ATTPE - Teachers Attitude toward teaching Physical Education" (Ali and Prasanna, 2019)

It is evident from Table 4.1.06 that secondary school Physical Education and sports teachers under five years, 6-10 years, 11-15 years, and more than 16 years of teaching experience differ significantly in the three components of attitude towards Physical Education, namely ALPE, PTPE and ATTPE as the p value is 0.00. To further analyse the data and see the significance among the different levels of experience for the teachers, a Post hoc analysis was done.

Table 4. 1.07- Post-hoc Test Results for attitude towards learning Physical Education (ALPE) for Secondary school Physical Education and sports teachers in relation to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
ALPE	< 5	6 - 10	-0.28831	0.15599	0.066
		11 - 15	-.97446*	0.15871	0.000
		> 16	-1.06103*	0.17176	0.000
	6 - 10	< 5	0.28831	0.15599	0.066
		11 - 15	-.68615*	0.14538	0.000
		> 16	-.77272*	0.15952	0.000
	11 - 15	< 5	.97446*	0.15871	0.000
		6 - 10	.68615*	0.14538	0.000
		> 16	-0.08657	0.16218	0.594
	> 16	< 5	1.06103*	0.17176	0.000
		6 - 10	.77272*	0.15952	0.000
		11-15 >16	0.08657	0.16218	0.594

ALPE--- "Attitude towards learning Physical Education

When comparing the level of experience of teachers for attitude towards learning Physical Education, Table 4.1.07 show that there is a significant difference in ALPE for teachers with experience of less than 5 years compared to teachers of experience with greater than 11 years as the p value is 0.00. However, when comparing the attitude of teachers between less than 5years against 6-10 years, there is no significant difference as the p value is 0.066. The results showed that there is also no significant difference when comparing the teachers with 11-15 years against those with > 16 years' experience with a p-value of 0.594 . This result shows that the teachers with 11 and more years of experience can be categorised together in terms of attitude towards learning Physical Education and sports.

Table 4.1.08- Post-hoc Test Results for how passionate teachers are towards Physical Education (PTPE) for Physical Education and sports teachers in secondary schools in Fiji in relation to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
PTPE	< 5	6 - 10	-0.18861	0.15960	0.238
		11 -15	-.82492*	0.16238	0.000
		> 16	-.85732*	0.17573	0.000
	6 - 10	< 5	0.18861	0.15960	0.238
		11 - 15	-.63631*	0.14874	0.000
		> 16	-.66870*	0.16321	0.000
	11 - 15	< 5	.82492*	0.16238	0.000
		6 - 10	.63631*	0.14874	0.000
		> 16	-0.03240	0.16593	0.845
	> 16	< 5	.85732*	0.17573	0.000
		6 - 10	.66870*	0.16321	0.000
		11-15 >16	0.03240	0.16593	0.845

Passionate teachers towards Physical Education (PTPE)

Table 4.1.08 show how passionate experienced teachers are about Physical Education and sports in comparison to less experienced teachers. There is a significant difference between teachers with five years or less experience when compared to teachers with 11-15 years or more experience as the p-value is 0.00. However, there is no significant difference between teachers with five years or less experience when compared to teachers with 6-10 years of experience as the p-value is 0.238. The findings also revealed no significant difference between teachers with 11-15 years of experience when compared to those with more than 16 years of experience with a p value of 0.845 , implying that teachers can be grouped with more than 11 years of experience categorised together in terms of how passionate teachers are towards teaching Physical Education and sports.

Table 4.1.09 - Post-hoc Test Results for Teachers Attitude toward teaching physical Education (ATTPE) for Physical Education and sports teachers in Secondary schools in Fiji in relation to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
ATTPE	< 5	6 - 10	-.35065*	0.17234	0.043
		11 -15	-1.01248*	0.17535	0.000

	> 16	-1.10309*	0.18976	0.000
6 - 10	< 5	.35065*	0.17234	0.043
	11 - 15	-.66183*	0.16061	0.000
	> 16	-.75244*	0.17624	0.000
11 - 15	< 5	1.01248*	0.17535	0.000
	6 - 10	.66183*	0.16061	0.000
	> 16	-0.09061	0.17918	0.614
> 16	< 5	1.10309*	0.18976	0.000
	6 - 10	.75244*	0.17624	0.000
	11 - 15	0.09061	0.17918	0.614

Teachers Attitude toward teaching Physical Education (ATTPE)

Table 4.1.09 shows the teachers attitude toward teaching Physical Education. There is a significant difference between teachers with five years or less experience when compared to teachers with 11- 15years or more experience as the p-value is 0.00. However, there is no significant difference between teachers with 5 years or less experience comparing with 6-10 years of experience as the p-value is 0.043. However, when comparing teacher with experience of 6-10 and greater than 16 years there is a significant difference with a p value of 0.00. As the teachers got more experienced, the mean for the attitude towards Physical Education decreased. The reason for the decline in mean may due to the age factor as teaching Physical Education requires lots of physical movement of the teachers (Obama, 2011).

Analysis and Interpretation of Data to test Hypothesis on Attitude Towards Physical Education and sports in relation to teacher type as specialist or non-specialist

Table 4.1.10: t-test results comparing Attitude Towards Physical Education amongst specialist and non-specialist Secondary school Physical Education and sports teachers

Group	N	Mean	Std. Deviation	t	P
Specialist	115	139.87	14.050	31.91	0.573
Non-Specialist	139	77.59	16.568		

***Significant at 0.05 level**

The attitude of specialist and non-specialist Physical Education teachers were found to be similar. Table 4.1.10 indicates that the t-value is 31.91 and the p-value of .0.573, which is not significant. Thus, the null hypothesis is accepted. The results reflect specialist and non-specialist Secondary school Physical Education and sports teachers' attitude does not differ significantly towards Physical Education and sports.

Table 4.1.11- Analysis of Variance of components of Attitude Towards Physical Education and sports in relation to teacher type as specialist or non-specialist

		Sum of Squares	df	Mean Square	F	Sig.
ALPE	Between Groups	21633.706	1	21633.706	701.029	0.000
	Within Groups	7776.708	252	30.860		
	Total	29410.413	253			
PTPE	Between Groups	30280.233	1	30280.233	753.292	0.000
	Within Groups	10129.692	252	40.197		
	Total	40409.925	253			
ATTPE	Between Groups	29899.044	1	29899.044	652.920	0.000
	Within Groups	11539.795	252	45.793		
	Total	41438.839	253			

***Significant at 0.05 level** ALPE--- "Attitude towards learning Physical Education; PTPE-- Passionate teachers towards Physical Education; ATTPE - Teachers Attitude toward teaching Physical Education" (Ali and Prasanna, 2019)

Table 4.1.11 shows that the three components namely ALPE, PTPE, and ATTPE have p-value of 0.000. This means that there is significant difference found among the three components of attitude towards Physical Education between specialist when compared to non-specialist Physical Education teachers. Thus, the alternative hypothesis is accepted. The reason for the result is that the specialists were found to have more positive attitude towards learning Physical education and sports, were more passionate, and had positive attitude towards teaching Physical Education.

Discussion

Alexander and Strain (1978) have stated that teachers' attitudes impact their care for their students and behaviour. This mindset of teachers affects both students' self-image and academic performance. Physical Education aids teachers to educate and develop positive attitudes and greater awareness toward sports. Students who acquire knowledge and skills in school and practice sports are more likely to be physically active outside school (Shinawi, 2006). It is widely accepted that to disseminate the correct essence of Physical Education, a teacher's understanding of the content or subject is essential. The selected attitude variables between the different groups suggested that teachers had a favourable attitude in this study.

The dependent variable wise discussion is as follows:

Qualifications of teachers play an important factor to determine the enthusiasm for learning. The refresher courses are required for teachers to undertake to upgrade the existing knowledge. It is important so that the teachers can effectively disseminate the essence of Physical Education to the students. A significant difference in ALPE, PTPE, and ATTPE has given the direction to the need of the qualification up-grade of the PEMAC teachers in Fiji. Several studies Awandia (2019); Ahsan, (2009), Filgona, Sakiyo, & Gwany (2020) and Ali, 2021) supported this finding. They discovered similar results because teachers' attitudes toward learning by qualification differed, reflected in the means. Those teachers with lower qualifications demonstrated a more positive attitude toward learning because they needed to improve their qualifications. Teachers' positive attitudes, decisions, and feelings toward learning, according to Chastain (1998), promote the quality of Physical Education. The result revealed that although the teachers with diplomas had a higher mean than the teachers with a degree for the attitude of the teachers, this was due to the teachers with diplomas having a Physical Education qualification, but most teachers with a degree qualification were from other disciplines.

Teachers' Qualification (TQ) refers to the most fundamental training that a trainee teacher receives to practice. According to Kola and Sunday (2015), 'qualification' is knowledge, skills and experience that qualifies a person to accomplish a task or work. As a result, a teacher's qualification, for instance a teacher's certification qualifies them to impart curriculum (Aina & Olanipekun, 2015). According to Gaji (2014), certification is the standard of qualifications that is associated with knowledge of teachers on teaching and learning. The certification requirements differ in countries; however, teachers must undertake an education programme, have had practical training and meet the requirements set out by the Higher Education Commission. Fiji High Education Commission is the authority for admission of the teachers into the profession and provides accreditation to the Universities in Fiji for the various programmes (FHEC, 2020).

There are teachers in Fiji secondary schools who are specialist in PE and there are some who teach PE but do not have a major in PE. The T-test results showed that there was no significant difference in the attitude of theses specialist and non-specialist teachers. However, there was a significant difference when the three components of the attitude were compared, that include ALPE, PTPE, and ATTPE, within the two selected groups. The group with specialist teachers

had a higher mean over the group with non-specialist teachers. The working atmosphere and the activities in Physical Education class are almost the same in schools. The probable reason for this result is that PE is a non-examinable subject in Fiji. The non-specialist teachers are perhaps not paying as serious attention to this Physical Education and sports as expected. They take the subject as a more leisure time activity than a subject which is equally or more important than any other academic subject in the curriculum.

4.02 Analysis and Interpretation of Objective 2

To compare teacher effectiveness of secondary schools Physical Education and sports teachers in relation to teaching experience, teacher type and teaching qualification.

The demographic representation of teacher effectiveness for teaching Physical Education and sports in secondary schools of Fiji in relation to qualification, experience and teacher type was done in the table to demonstrate each variable and its results

Table 4.2.01- Demographic Profile (N=254)

Variable	component	Characteristics	Mean SD	SD	N (%)
Qualification	KS	Diploma	34.55	7.37	Diploma - 19% Degree - 81%
		Degree	23.74	8.92	
	TLO	Diploma	46.55	9.95	
		Degree	32.22	11.59	
	Motivator	Diploma	32.63	6.22	
		Degree	21.56	8.36	
	IR	Diploma	31.28	5.98	
		Degree	21.88	7.60	
Teacher type	KS	Specialist	36.63	4.53	Specialist 45 % non-specialist 55%
		Non-Specialist	18.99	4.25	
	TLO	Specialist	48.81	7.25	
		Non-Specialist	26.34	5.61	
	Motivator	Specialist	33.94	3.38	
		Non-Specialist	17.37	4.84	
	IR	Specialist	32.81	3.65	
		Non-Specialist	17.97	4.03	
Experience	KS	< 5	21.57	8.12	< 5- 22% 6-10 - 30% 11 -15 - 28% > 15 - 20%
		6 - 10	24.46	8.67	
		11 - 15	30.45	9.74	
		> 16	31.71	9.39	
	TLO	< 5	29.00	9.41	
		6 - 10	32.56	11.27	
		11 - 15	42.14	12.75	
		> 16	42.67	12.50	

Motivator	< 5	19.89	7.64
	6 - 10	22.77	9.17
	11 - 15	28.07	8.79
	> 16	28.90	8.49
IR	< 5	19.93	6.58
	6 - 10	22.44	7.60
	11 - 15	27.93	8.11
	> 16	28.67	7.88

"Knowledge of the subject (KS), Transparent and Learning, Oriented (TLO) Motivator, Interpersonal Relations (IR)" (Ali and Prasanna, 2019)

Table 4.2.01 reveals the demographic characteristics of study participants on teacher effectiveness. The components of the teacher's effectiveness were embedded in the questionnaire to inquire on and evaluate the four components of teacher effectiveness in Physical Education and sports. These components were knowledge of the subject (KS). This was used to explore if the teachers had a good understanding of what they are teaching to the students. The second component was Transparent and Learning, Oriented (TLO), which was used to explore the child-cent red learning approach used by the teacher. The third component was Motivator (M), which was used to explore the techniques used to arouse the enthusiasm in the lesson. The final component was Interpersonal Relations (IR), which was used to explore the techniques used by the teacher to interact with the students during the lesson.

Table 4.2.02 Percentage Level of Teacher effectiveness for teaching Physical Education and sports in secondary schools in Fiji

Table 2- Norm Based Grading (N=254)

Level of Attitude	N	Mean	SD	%
High	115	148.92	15.29	45.3
Average	122	81.3	11.85	48
Inadequate	17	53.59	4.06	6.7

Results from Table 4.2.02 show that 48 % of the participants had an average level, and 45.3 % had a high level for effective in teaching. The result was good as "No other attribute of schools comes close to having teacher influence on student achievement" (Hanushek 2011). However, 6.7% of the teachers showed inadequate teacher effectiveness. One of the most appealing features of teacher effectiveness measures for policymakers is the technique impervious to

severe bias critiques. Historically, the primary concern has been that teachers shall be highly effective to make a difference in the development of a child (Jackson, 2012).

Analysis and Interpretation of Data to test Hypothesis for teacher effectiveness in teaching Physical Education and sports in secondary schools of Fiji in relation to qualification

The hypothesis regarding qualification was tested using the "t'-test' with the level significance fixed at 0.05.

Table 4.2.03- test results comparing Teaching effectiveness of Physical Education and sports teachers relation to qualification

Group	N	M	SD	t	f	P
Diploma	178	141	27.57			
Degree	76	96.85	34.59	9.863	7.165	0.008

It is evident from Table 4.2.03 there is a significant difference in effectiveness of teachers with a degree and diploma, The p-value is 0.008, which is less than the significance value. Therefore, the alternative hypothesis has been accepted. The result indicates that teachers with diploma qualification had a higher mean. It shows teachers with diploma qualification are more effective towards Physical Education and sports. The t-value is 9.863, which is far away from 0. This indicates greater evidence against the null hypothesis. T-value reiterates the existence of significant difference in teacher effectiveness. The teachers with diplomas had a higher mean for teacher effectiveness. The reason for the higher mean is that teachers with a diploma qualification are specialist teachers and teach effectively.

Analysis and Interpretation of Data to test Hypothesis on Components of effectiveness on Physical Education and sports concerning Qualification

Table 4.2.04- Analysis of Variance of components of teacher effectiveness on Physical Education and sports in relation to the qualification of the teacher

		SS	DF	MS	f	p
KS	Between Groups	6224.96	1	6224.96	86.339	0.000
	Within Groups	18168.90	252	72.10		
TLO	Between Groups	10933.66	1	10933.66	88.351	0.000

	Within Groups	31185.80	252	123.75		
Motivator	Between Groups	6533.09	1	6533.09	107.705	0.000
	Within Groups	15285.62	252	60.66		
IRS	Between Groups	4705.95	1	4705.95	91.827	0.000
	Within Groups	252.00	51	51.25		

***Significant at 0.05 level**

"Knowledge of the subject (KS), Transparent and Learning, Oriented (TLO), Motivator, Interpersonal Relations (IR)" (Ali and Prasanna, 2019)

Table 4.2.04 shows the four components used to measure the teacher effectiveness among those teaching Physical Education and sports. The F-value for KS is 86.39 and the p-value is 0.000, which shows a significant difference in teachers' knowledge of subject matter. Similarly, TLO is 88.35 and the p-value is 0.000, which also shows a significant difference in teachers' transparency and learning oriented lesson. Motivator is 107.0 and the p-value is 0.000, which again shows a significant difference in teachers' level of motivation and cultivation of relations. IRS is 91.8 and once again the p-value is 0.000 Thus, the alternative hypothesis has been accepted for KS, TLO, Motivator and IRS. The results reveal that there is significant difference in different components of teacher effectiveness when compared to the qualification of the teachers.

Analysis and Interpretation of Data to test Hypothesis on teacher effectiveness of Physical Education and sports in respect to teacher's experience

Table 4.2.05 Analysis of Variance of Physical Education and sports teachers Related to experience

Effectiveness	df	SS	MS	f	P
Between Groups	3	67960.38	22653.46	18.58	0.00
Within Groups	250	304746.61	1218.99		

Table 2.05 shows that there was a significant difference found between groups and within groups. These groups reflected under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience. The critical value of F(18.58) was less than the tabulated F(3.16). Thus, the alternative hypothesis has been accepted. The result shows experienced teachers were more effective in teaching Physical Education and sports than less experienced teachers.

Analysis and Interpretation of Data to test Hypothesis on Components of teacher effectiveness for Physical Education and sports in relation to teaching experience

Table 4.2.06- Analysis of Variance on Components teacher effectiveness of physical education and sports teachers in relation to teaching experience

	Sum of Squares	df	Mean Square	f	p
KSS	4067.104	3	1355.701	16.674	0.000
	20326.754	250	81.307		
TLO	8444.360	3	2814.787	20.897	0.000
	33675.104	250	134.700		
Motivator	3240.375	3	1080.125	14.535	0.000
	18578.337	250	74.313		
IR	3173.565	3	1057.855	18.306	0.000
	14446.864	250	57.787		

***Significant at 0.05 level**

"Knowledge of the subject (KS), Transparent and Learning, Oriented (TLO) Motivator, Interpersonal Relations (IR)" (Ali and Prasanna, 2019)

It is evident from Table 4.2.06 that secondary school Physical Education and sports teachers under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience differ significantly, with the p-value of 0.000, when compared to the four components to measure the teacher effectiveness among those teaching Physical Education and sports. To further analyse the data and see the significance among the teachers' different experiences, a Post hoc analysis was done.

Table 4.2.07 Post-hoc Test Results for teacher effectiveness of Physical Education knowledge of the subject (KS) for Secondary schools in relation to teaching experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
KS	< 5	6 - 10	-2.89	1.59627163	0.272
		11 - 15	-8.87663*	1.62814456	0.000
		> 16	-10.13181*	1.76066485	0.000
	6 - 10	< 5	2.887	1.59627163	0.272
		11 - 15	-5.98917*	1.47904256	0.000
		> 16	-7.24434*	1.62377734	0.000
	11 - 15	< 5	8.87663*	1.62814456	0.000
		6 - 10	5.98917*	1.47904256	0.000

	> 16	-1.26	1.65512068	0.873
> 16	< 5	10.13181*	1.76066485	0.000
	6 - 10	7.24434*	1.62377734	0.000
	11 - 15	1.255	1.65512068	0.873

"Knowledge of the subject (KS)

Table 4.2.07 shows effectiveness based on teacher experience for Knowledge of the subject. The result indicates that there is no significant difference, with the p-value of 0.272, in KS for teachers with fewer than 5 years of experience when compared to teachers of experience with 6-10 years. However, when comparing effectiveness of teachers between less than 5 years against more than 11 years, there is significant difference, with the p-value of 0.000. The results revealed that there is also no significant difference when compared to the teachers with 11 to 15 years against those with greater than 16 years' experience, with the p-value of 0.873. This result shows that the teachers with 11 or more years of experience can be categorised together in terms of knowledge of the subject.

This result indicates that teachers were well versed with the curriculum when they graduated from the university and upgraded their skills until ten years of teaching experience. Fewer experienced teachers had a higher mean than more experienced teachers for teaching Physical Education. Quality teaching requires teachers to know their subjects, understand the concepts, develop knowledge of Physical Education, and use varied pedagogies to teach skills. Quality of instruction and student exam results suffer when there is a lack of teaching experience among teaching groups (Smithers & Robinson, 2015).

Table 4.2.08 **Post-hoc Test Results for teacher effectiveness of Physical Education (TLO)for Teachers of Physical Education and Sports in Secondary Schools in relation to Teaching Experience**

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
TLO	< 5	6 - 10	-3.56410	2.05460	0.308
		11 - 15	-13.14085*	2.09562	0.000
		> 16	-13.66667*	2.26619	0.000
	6 - 10	< 5	3.56410	2.05460	0.308
		11 - 15	-9.57674*	1.90371	0.000
		> 16	-10.10256*	2.09000	0.000
	11 - 15	< 5	13.14085*	2.09562	0.000
		6 - 10	9.57674*	1.90371	0.000
		> 15	-0.52582	2.13035	0.995
	> 16	< 5	13.66667*	2.26619	0.000

	6 - 10	10.10256*	2.09000	0.000
	11 - 15	0.52582	2.13035	0.995

Transparent and Learning, Oriented (TLO

Table 4.2.08 shows how transparent and learning-oriented teachers are about Physical Education when compared to teacher experience. Transparency refers to the teachers disclosing their reasoning for class organization and activity selection. According to the responses, the researchers reported that transparency aided purpose, motivated students, provide clarity and created connection to course (Anderson et al., 2007).

The result shows that there is no significant difference, with the p-value of 0.308, between teachers with less than five years of experience when compared to teachers with 6 to 10 years. However, there was a significant difference, with the p-value of 0.000 for teachers with 16 or more years of experience. This means that the most experienced Physical Education and sports teachers were the least transparent in their lessons than the less experienced teachers.

Table 4.2.09 Post-hoc Test Results for teacher effectiveness of Physical Education (Motivator)for Physical Education and Sports Teachers in Secondary Schools in relation to Teaching

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
Motivator	< 5	6 - 10	-2.88034	1.52608	0.236
		11 - 15	-8.18153*	1.55655	0.000
		> 15	-9.01307*	1.68324	0.000
	6 - 10	< 5	2.88034	1.52608	0.236
		11 - 15	-5.30119*	1.41400	0.001
		> 16	-6.13273*	1.55237	0.001
	Nov-15	< 5	8.18153*	1.55655	0.000
		6 - 10	5.30119*	1.41400	0.001
		> 16	-0.83154	1.58234	0.953
	> 16	< 5	9.01307*	1.68324	0.000
		6 - 10	6.13273*	1.55237	0.001
		11 - 15	0.83154	1.58234	0.953

Motivator (M)

Table 4.2.09 shows how motivating the teachers were when teaching Physical Education and sports in secondary schools of Fiji. The result indicates no significant difference, with the p-value of 0.236, between teachers with five or less years of experience when compared to teachers, 6 to10 years. However, when comparing teacher experience of 6 to10 years to 11 to 15 years of experience, there was a significant difference, with the p-value of 0.000. When

comparing teacher experience of 11-15 years to more than 16 years of experience, there was no significant difference, with the p-value of 0.953.

Table 4.2.10 Post-hoc Test Results for teacher effectiveness of Physical Education interpersonal relations with students (IR)while teaching Physical Education and sport concerning teaching experience

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
IR	< 5	6 - 10	-2.50997	1.34574	0.246
		11 - 15	-8.00365*	1.37261	0.000
		> 15	-8.74074*	1.48433	0.000
	6 - 10	< 5	2.50997	1.34574	0.246
		11 - 15	-5.49368*	1.24691	0.000
		> 15	-6.23077*	1.36892	0.000
	11 - 15	< 5	8.00365*	1.37261	0.000
		6 - 10	5.49368*	1.24691	0.000
		> 15	-0.73709	1.39535	0.952
	> 15	< 5	8.74074*	1.48433	0.000
		6 - 10	6.23077*	1.36892	0.000
		11 - 15	0.73709	1.39535	0.952

Interpersonal Relations (IR)

Table 4.2.10 shows a comparison of teacher experience against interpersonal relations with the students during the PE and sports lessons. Students were encouraged to have autonomous voices through interpersonal relations, which came in teachers through experience where teachers could encourage students to freely express their opinions and those of others (Keating and Janmaat, 2015). Excellent interpersonal relations of experienced teachers and students reinforce problem-solving skills and build confidence in learners, ensuring their success (Yilmaz and Baydas, 2017; and Akçayr and Akçayr, 2018).

The results indicate no significant difference, with the p-value of 0.246 for teachers with five or less years of experience when compared to teachers with 6 to 10 years. However, when comparing teacher experience of 6-10 years to 11-15 years of experience, there was a significant difference, with the p-value of 0.000. When comparing teacher experience of 11-15 years to 16 or more years of experience, there was no significant

difference, with the p-value of 0.952. The teachers with moderate experience had the most effective interpersonal skills in their lessons.

Analysis and Interpretation of Data to test Hypothesis on effective teaching of Physical Education and sports in respect to teacher type as specialist or non-specialist

Table 4.2.11: t-test results comparing teacher effectiveness between specialist and non-specialist secondary school Physical Education and sports teachers

Teacher Type	N	Mean	SD	f	t	Sig.
Specialist	115	148.03	16.71	3.53	33.06	0.06
Non-Specialist	139	78.655	16.60			

The effectiveness of specialist and non-specialist Physical Education teachers were found to be similar. Table 4.2.11 indicates that the t-value is 33.06 and p-value is 0.06, which is not significant. Thus, the null hypothesis is accepted. The results reflect specialist and non-specialist Secondary school Physical Education and sports teachers' effectiveness does not differ significantly towards Physical Education and sports.

However, the specialist teachers had a higher mean of 148.03 for effectiveness when compared to non-specialist teachers. The research coincided with the research done on elementary school teachers where the normal classroom teachers were less effective and faced difficulties in attaining specific Physical Education objectives compared to the specialist Physical Education teachers (Behets,1995, Faucette,1990)

Table 4.2.12- Analysis of Variance of four components to measure teacher effectiveness for Physical Education and sports in respect to teacher type

		Sum of Squares	df	Mean Square	F	Sig.
KS	Between Groups	19567.94	1	19567.94	1021.800	0.000
	Within Groups	4825.91	252	19.15		
TLO	Between Groups	31776.57	1	31776.57	774.221	0.000
	Within Groups	10342.90	252	41.04		
Motivator	Between Groups	17283.85	1	17283.85	960.455	0.000

	Within Groups	4534.86	252	18.00		
IR	Between Groups	13854.75	1	13854.75	927.164	0.000
	Within Groups	3765.68	252	14.94		

Table 4.2.12 shows the four components of teacher effectiveness, namely KS, TLO, Motivator and IR towards teaching Physical Education when comparing specialist to non-specialist Physical Education teachers in Fiji. The p-value is 0.000 and this means that there is significant difference found among the four components of teacher effectiveness. Thus, the alternative hypothesis has been accepted. During Physical Education lessons, effective physical activity teaching can be improved with a well-designed, broader multicomponent strategy supplemented by a specialist- Physical Education teachers (Telford, 2016). However, PE can only make a significant contribution to improving children's habitual PA, if daily classes are taken, and even this would require a wider multicomponent strategy to be supplemented (Telford, 2016)

Discussion

Effective teaching practices in PE appear to be essential for every child in school to achieve the potential (Hickson & Fishburne, 2001). Research done in classroom has signalled best teaching practices to achieve success in learning outcomes in PE lessons (Borich, 1996). Student learning has not been a priority for teachers of Physical Education (Hickson & Fishburne, 2002). Most classroom research on effective teaching has focused on traditional subjects like Maths and language arts, so Physical Education has gathered unsubstantial data. Research on effective teaching of Physical Education and the way it aids in students achieving the learning outcomes, as a result, is limited. The gap in research can be filled if the teachers of PE and sports are empowered to aid the learning process. Thus, the thesis highlights different areas of effectiveness for secondary school teachers teaching PE and sports in Fiji.

Student achievement is linked to teaching experience (Huang and Moon, 2018). The teachers with experience are not very effective particularly at beginning of their teaching career. And, they continue to be effective in second, and third decades of teaching. Teachers' effectiveness increases with support and collegial nature of the teaching atmosphere if they teach a subject at same grade level (Rink and Hall, 2008). Similar results have been obtained from this research when seeing the post hoc test for the teachers' experience. The teachers with less than five years

of experience were not very effective but got more effective when there had experience from 6-15 years. However, after 16 years, the level of effectiveness went down.

The finding of the research revealed that there was a significant difference in teacher effectiveness in relation to experience. The results are concurrent with several researchers investigating the link between physical activities participation and experiences in PE and sports in schools. To develop motor skills and have enjoyable physical activity experiences, prior PE experience is critical (Macfadyen, 1999; Sallis et al., 1999). A comparison of experience revealed that the younger respondents had greater confidence in teaching a variety of topics in Physical Education and in planning the lessons (Thompson, 1996).

The results show a significant difference in teacher effectiveness in relation to the qualification of the teachers. The results are like the studies done by other researchers. In the US, to ensure that qualified professionals teach Physical Education curriculum, the Centres for Disease Control and Prevention (CDC) recommend policies that require credentialed Physical Education teachers to take classes in the schools (Lowry et al., 2005). Research on the impact of PE specialists in schools in Canada had similar results (Spence et al., 2004). Other research shows that Physical Education specialists spend more time and effort in development of extramural physical activities (Decor et al., 2005). Many studies show that the curricular and extramural activity programmes in PE differ by teacher type. The specialists integrate programme for a variety of active or moderate physical activities (Dwyer et al., 2008).

4.03 Analysis and Interpretation of Objective 3 . To compare content knowledge of Physical Education and sports teachers in secondary schools in relation to teaching experience, teacher type and qualification.

The Demographic representation for teacher knowledge of content in Physical Education and sports in secondary schools of Fiji in relation to qualification, experience and teacher type was done in the table to demonstrate each variable and its results

Table 4.3.01- Demographic Profile (N=254

Variable	component	Characteristics	Mean SD	SD	N (%)
Qualification	BMM	Diploma	6.67	1.56	Diploma -19% Degree - 81%
		Degree	5.60	1.97	
	FPD	Diploma	7.03	2.01	
		Degree	5.57	2.39	
	PASD	Diploma	6.86	2.40	
		Degree	4.85	2.76	
Experience	BMM	< 5	5.93	1.93	

		6 - 10	5.95	1.93	
		11 - 15	5.87	1.96	
		> 16	5.92	1.86	< 5- 22%
		< 5	6.02	2.38	6-10 - 30%
	FPD	6 - 10	6.28	2.70	11 -15 - 28%
		11 - 15	5.75	2.10	> 15 - 20%
		> 16	5.94	2.20	
		< 5	5.33	3.00	
	PASA	6 - 10	5.78	3.03	
		11 - 15	5.28	2.46	
		> 16	5.31	2.74	
	BMM	Specialist	7.48	1.29	Specialist 45 % non-specialist 55%
		Non-Specialist	4.63	1.29	
Teacher type	FPD	Specialist	8.10	1.76	
		Non-Specialist	4.28	1.06	
	PASD	Specialist	8.07	1.76	
		Non-Specialist	3.29	1.21	

Body Movement and Motor Skill Development-(BMMSD) Fitness, Personal Development, And Safety -(FPDS) Physical Activity and Social Development -(PASD)

Table 4.3.01 reflects the demographic characteristics of study participants showing the knowledge of content of teachers of Physical Education and sports in secondary schools in Fiji. Teachers were given 30 multiple choice questions to answer, and the questions were from the different key aspects from year 9 and 10 syllabi of the Fijis education curriculum of Physical Education. The questions were divided into three sub-themes such as Body Movement and Motor Skill Development-(BMMSD), Fitness, Personal Development, And Safety -(FPDS), Physical Activity and Social Development -(PASD). The table above illustrates that 19% of teachers with a Diploma teaching Physical Education and 81 per cent of the teachers with a degree. 45% were specialist teachers in Physical Education, meaning they were trained to teach Physical Education. For the research, the teachers varied in the teaching experience, as shown in the table.

Comparison for the Level of Content knowledge professed by Teachers of Physical Education and Sports in Secondary Schools in Fiji.

Table 4.3.02 Norm Based Grading (N=254)

knowledge	Mean	SD	N%
Low	9.26	1.182	12.2%
Average	13.73	2.541	49.6%
High	24.71	2.268	38.2%

Several research shows that teachers with high proficiency in content knowledge have a considerable impact on their students' academic performance. Despite this, teachers in many nations still lack some of the material expertise they need to effectively educate their students. Table 25 show 50% of the participants have average level of content knowledge in Physical Education and sports. This result is considered an alarming case for the stakeholders to organize professional development sessions for the school's Physical Education and sports teachers. Only 38.2 % of the participants had a high content knowledge level.

Table 4.3.03- t-test results comparing content knowledge of Physical Education and sports in relation to the qualification of teacher

	N	Mean	Std. Deviation	t	P
Diploma	76	23.64	3.312	32.000	0.00
Degree	178	12.19	2.377		

***Significant at 0.05 level**

It is evident from Table 3.3 that there is a significant difference in content knowledge of teachers having degrees and diplomas as the obtained p-value is 0.00, which is less than the significance value of 0.05. Therefore, the alternative hypothesis has been accepted. The teachers with diploma qualification had a higher mean showing better content knowledge of Physical Education and sports. The t-value of 32, which is far from 0 indicates greater evidence against the null hypothesis. The t-value shows there is greater evidence that there is a significant difference.

Analysis and Interpretation of Data to test Hypothesis on Components of content knowledge in Physical Education and sports in relation to Qualification

Table 4.3.04- Analysis of Variance of Components Content Knowledge in Physical Education and Sports in Relation to the Qualification of the Teachers

		Sum of Squares	df	Mean Square	F	Sig.
BMMSD	Between Groups	61.611	1	61.611	17.894	0.000
	Within Groups	867.653	252	3.443		
FPD	Between Groups	112.486	1	112.486	21.614	0.000
	Within Groups	1311.498	252	5.204		
PASD	Between Groups	213.323	1	213.323	30.241	0.000
	Within Groups	1777.610	252	7.054		

Body Movement and Motor Skill Development-(BMMSD) Fitness, Personal Development, And Safety -(FPDS) Physical Activity and Social Development -(PASD)

Table 4.3.04 is showing that the f-value for Body Movement and Motor Skill Development (BMMSD) component is 17.8 with a p-value of 0.000. Similarly, there is also a significant difference for Fitness, Personal Development, And Safety (FPDS) as the f value is 21.6 and the p-value of 0.000. Moreover, when comparing Physical Activity and Social Development (PASAD), the f-value of 30.2 and the p-value of 0.00 shows significance difference in these components. Thus, there is a significant difference in the components of content knowledge when comparing the qualifications of the teachers. The alternative hypothesis is therefore accepted.

Analysis and Interpretation of Data to test Hypothesis on Teachers' Content knowledge Physical Education in respect to Teacher's Experience

Table 4.3.05 Analysis of Variance of Physical Education and Sports Teachers Related to Experience

	Sum of Squares	df	Mean Square	f	p
Between Groups	50.174	3	16.725	0.409	0.747
Within Groups	10229.542	250	40.918		

Table 4.3.05 shows no significant difference found among the four selected experience categories. These categories were under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience. The result f-value of 0.409 is less than the calculated F(18.51); thus, the hypothesis has been accepted. The teachers' previous experiences were found not to have influenced the preparation for the delivery of new topic. Subject matter knowledge can help, but it can also obstruct the process of teaching and learning. The research findings of Chan & Yung (2017) show that two sorts of experienced teachers can use their prior teaching experiences to generate new content knowledge and those who can't.

Analysis and Interpretation of Data to test Hypothesis on Components of Content Knowledge in Physical Education and Sports in relation to Teaching Experience

Table 4.3.06- Analysis of Variance for Content Knowledge components of Physical Education and Sports Related to Teaching Experience

		Sum of Squares	df	Mean Square	f	p
BMMSD	Between Groups	0.220	3	0.073	0.020	0.996
	Within Groups	929.044	250	3.716		

FPDS	Between Groups	10.948	3	3.649	0.646	0.586
	Within Groups	1413.037	250	5.652		
PASD	Between Groups	12.292	3	4.097	0.518	0.67
	Within Groups	1978.641	250	7.915		

***Significant at 0.05 level**

Body Movement and Motor Skill Development-(BMMSD) Fitness, Personal Development, And Safety -(FPDS) Physical Activity and Social Development -(PASD)

It is evident from Table 4.3.06 that secondary school Physical Education and sports teachers under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience do not differ significantly in components content knowledge in Physical Education and sports. To further analyse the data and see the significance among the teachers' different experiences, a Post hoc analysis was done.

Table 4.3.07- Post-hoc Test Results for Body Movement and Motor Skill Development (BMMSD) as One Aspect of the Content Knowledge for Secondary School Physical Education and Sports Teachers in Relation to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
BMMSD	<5	6 - 10	-0.02279	0.34126	1.000
		11 - 15	0.05269	0.34808	0.999
		> 16	0.00436	0.37641	1.000
	6 - 10	<5	0.02279	0.34126	1.000
		11 - 15	0.07548	0.31620	0.995
		> 16	0.02715	0.34714	1.000
	11 - 15	<5	-0.05269	0.34808	0.999
		6 - 10	-0.07548	0.31620	0.995
		> 16	-0.04833	0.35385	0.999
	> 16	<5	-0.00436	0.37641	1.000
		6 - 10	-0.02715	0.34714	1.000
		11 - 15	0.04833	0.35385	0.999

Body Movement and Motor Skill Development-(BMMSD)

When comparing the level of experience of teachers to the content knowledge based on Body Movement and Motor Skill Development as reflected in Table 4.3.07, there was no significant difference among teachers with less than five years' experience, teachers with more than 11 years' experience, and teachers with more than 16 years of experience. The experience did not make a significant difference in the content knowledge for BMMSD.

Table 4.3.08- Post-hoc Test Results for Fitness, Personal Development, and Safety (FPDS) as Content Knowledge of Physical Education and Sports Teachers in Secondary Schools in Fiji in Relation to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
FPDS	<5	6 - 10	-0.26353	0.42087	0.924
		11 - 15	0.27204	0.42928	0.921
		> 16	0.07734	0.46422	0.998
	6 - 10	<5	0.26353	0.42087	0.924
		11 - 15	0.53557	0.38996	0.517
		> 16	0.34087	0.42812	0.856
	11 - 15	<5	-0.27204	0.42928	0.921
		6 - 10	-0.53557	0.38996	0.517
		> 15	-0.19470	0.43639	0.970
	> 16	<5	-0.07734	0.46422	0.998
		6 - 10	-0.34087	0.42812	0.856
		11 - 15	0.19470	0.43639	0.970

Fitness, Personal Development, and Safety (FPDS)

When comparing the level of experience of teachers to the content knowledge based on Fitness, Personal Development, and Safety as reflected in Table 3.8, there was no significant difference for teachers with experience of fewer than five years with teachers of experience of greater than 11 years, and more than 16 years. The experience did not make a difference in the content knowledge for FPDS of Physical education and sports teachers.

Table 4.3.09- Post-hoc Test Results for Physical Activity and Social Development (PASD)as content knowledge of Secondary School Teachers of Physical Education and Sports in Relation to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
PASD	<5	6 - 10	-0.44872	0.49803	0.804
		11 - 15	0.05164	0.50798	1.000
		> 15	0.01961	0.54932	1.000
	6 - 10	<5	0.44872	0.49803	0.804
		11 - 15	0.50036	0.46146	0.699
		> 15	0.46833	0.50661	0.792
	11 - 15	<5	-0.05164	0.50798	1.000
		6 - 10	-0.50036	0.46146	0.699
		> 15	-0.03204	0.51639	1.000
	> 15	<5	-0.01961	0.54932	1.000

6 - 10	-0.46833	0.50661	0.792
11 - 15	0.03204	0.51639	1.000

Physical Activity and Social Development (PASD)

When comparing the level of experience of teachers to content knowledge based on Physical Activity and Social Development as reflected in Table 4.3.09, there was no significant difference for teachers with experience of fewer than five years with teachers of experience of greater than 11 years, and more than 16 years. The experience did not make a difference in the content knowledge for PASD for Physical education and sports teachers.

Analysis and Interpretation of Data to test Hypothesis on Level of Content Knowledge in Teaching Physical Education in Relation to Teacher Type

Table 4. 3.10: T-test Results Comparing Content Knowledge of Specialist and Non-specialist Secondary School Physical Education and Sports Teachers

Teacher Type		N	Mean	Std. Deviation	t	sig
Knowledge	Specialist	115	23.64	3.312	32	0.00
	Non-Specialist	139	12.19	2.377		

It is evident from Table 4.3.10 there was a significant difference in the content knowledge of the specialist and non-specialist Physical Education and sports teachers as the obtained p-value is 0.00, which is less than the significance value of 0.05. Therefore, the alternative hypothesis has been accepted. The specialist teachers have done the majors in Physical Education they had a better content knowledge than the non-specialist teachers.

Table 4.3.11- Analysis of Variance of components of content knowledge for Physical Education and sports in respect to teacher type as specialist or non-specialist

		Sum of Squares	df	Mean Square	f	Sig.
BMMSD	Between Groups	512.021	1	512.021	309.243	0.000
	Within Groups	417.242	252	1.656		
FPD	Between Groups	915.979	1	915.979	454.378	0.000
	Within Groups	508.005	252	2.016		
PASD	Between Groups	1439.000	1	1439.000	657.015	0.000
	Within Groups	551.933	252	2.190		

Body Movement and Motor Skill Development-(BMMSD) Fitness, Personal Development, And Safety -(FPDS) Physical Activity and Social Development -(PASD)

Table 4.3.11 shows that the three components namely BMMSD, FPD, and PASD have p-value of 0.000. This means that there is significant difference found among the three components of content knowledge between specialist when compared to non-specialist Physical Education

teachers. Thus, the alternative hypothesis has been accepted. The reason for the result is that the specialist are trained Physical Education teachers who learnt the content in the university as they specialized in teaching Physical Education.

Discussion

The findings of this study revealed a higher mean for the teachers who have Diploma than the teachers who have degree for the content knowledge in PE. The result was unusual as it is assumed that teachers with a degree will have higher scores in an exam for the content knowledge. The researcher found out that more Physical Education specialists had not upgraded their qualifications to a degree during the data collection. They represented the population for the diploma for this research. Therefore, the teachers having diplomas had a higher score for content knowledge as they were the specialist in the subject. Many researchers have investigated which teacher qualifications are linked to better performance for content knowledge. Teachers with higher education or an advanced degree in the subject they teach have a positive impact on student achievement (Syed, 2013; Athar, 2016). According to certain research, teachers' educational qualifications significantly impact their content knowledge, affecting the students (Ugbe and Agim, 2012; Asikhia, 2014; Olaleye, 2015). While some studies have concluded that educational attainment has no bearing on students' achievement, others have discovered it does (Adaramola, 2010; Raji, 2011).

Moreover, experienced teachers must solve difficulties and fashion resources for challenging content for varied ability of students (Grossman, 2005). Teachers typically use a set way to teach a subject, because learning it did not make a difference in their experience (Darling-Hammond & Bransford, 2005). It is also worth noting that a more experienced instructor spotted her learning egocentrism, prompting her to reconsider her teaching tactics. Stephen (2017), in his research on “The importance of pedagogical content knowledge in curriculum development for illumination engineering”, highlights that content knowledge can be built using educational material as teachers get more experienced and are exposed to learning. The researcher emphasis on In-service training for the teachers.

The results of the study showed that specialist Physical Education teachers had a better average on the content knowledge test given to the teachers. The test was based on the physical education curriculum content used in Fiji. The Physical Education test components also showed a significant difference between the non-specialist and specialist teachers. The Physical Education trained teachers are exposed to the curriculum's content knowledge in the university

to become specialists in PEMAC. The results are like several other researchers. Several educators think that subject specialization should be implemented more widely at all levels of education to build better teachers' content knowledge (Chan and Jarman, 2009; Gerretson et al., 2008; Reys and Fennell, 2003; Wu 2009). Content specialization develops knowledge and makes teachers passionate and confident in the field of study (McGatha et al., 2015). Specific content helps teachers create cohesive lessons in PE. The professional development helps tailor the instructions and the approaches used to improve content learning in PE (Research, 2012).

4.04 Analysis and Interpretation of Objective 4

To compare pedagogical practice with Teaching Experience, Teacher Type and Teaching qualification of Physical Education and Sports teachers in Secondary Schools in Fiji for Teaching of Physical Education Theory.

The demographic representation for pedagogy in teaching Physical Education and sports theory in secondary schools of Fiji in relation to qualification, experience and teacher type was done in the table to demonstrate each variable and its results.

Table 4.4.01- Demographic Profile (N=254)

Variable	Component	Characteristics	Mean	SD	N (%)
Qualification	IIL	Diploma	50.26	14.13	Diploma -19% Degree -81%
		Degree	39.57	11.96	
	AF	Diploma	7.79	2.24	
		Degree	6.05	2.20	
	SCM	Diploma	11.58	3.07	
		Degree	9.29	3.01	
	TIMC	Diploma	19.92	5.37	
		Degree	15.12	5.43	
Teacher type	IIL	Specialist	53.40	9.51	Specialist 45 % non-specialist 55%
		Non-Specialist	33.98	9.46	
	AF	Specialist	8.49	1.39	
		Non-Specialist	4.99	1.71	
	SCM	Specialist	12.61	2.09	
		Non-Specialist	7.80	2.15	
	TIMC	Specialist	21.36	3.90	
		Non-Specialist	12.58	3.83	
Experience	ILL	< 5	37.46	9.69	< 5- 22% 6-10 - 30% 11 -15 - 28% > 16 - 20%
		6 - 10	37.63	10.80	
		11 - 15	47.58	13.45	
		> 15	49.57	15.62	
	AF	< 5	5.61	1.90	

	6 - 10	6.31	2.35
	11 - 15	7.21	2.04
	> 15	7.10	2.78
SCM	< 5	8.89	2.67
	6 - 10	9.35	2.96
	11 - 15	10.97	3.12
	> 15	10.71	3.64
TIMC	< 5	13.70	4.42
	6 - 10	16.09	6.06
	11 - 15	18.11	5.52
	> 15	18.12	6.09

Introduction and Implementation of Lesson(IIL) Assessment and Feedback (AF), Student/Class Management(SCM) Time Management and Conclusion (TMC)

Table 4.4.01 reflects the demographic characteristics of study participants on pedagogy for taking theory class, the researcher observed the teacher's pedagogical practice in the classroom where the theory class was taken. In contrast, the teacher had the class for the theoretical knowledge of Physical Education as per the curriculum in Fiji. A PE curriculum "includes all knowledge, skills, and learning experiences provided to students within the school program". Pedagogy in Physical Education is the process of teaching and learning of physical activity. Pedagogy encompasses curriculum, instructions, teaching and teacher education. Physical Education programs which is of quality aim to improve all students' physical competence, health-related fitness, and develop a habit and satisfaction in integrating physical activity in their lives. (Stirrup & Hooper, n.d., 2021).

Table 4.4.02 Percentage Level of Pedagogical Practice While Taking a Theory Lesson by Physical Education and Sports Teachers in Secondary Schools in Fiji.

Pedagogy theory	Mean	N	SD	%
Expectation not met	33.00	8	4.342	1.3%
Satisfactory	59.84	117	7.164	34.8%
Exceeds expectation	99.59	129	10.952	63.9%

Results from Table 4.4.02 show that 63.9 of the participants who were observed for teaching physical education theory in the classrooms exceeded expectations from the teacher observation tool by the researcher,34.8 percent had satisfactory performance, and 1.3 % had expectations not met. The majority of the participants showed good teaching skills. Pedagogy is defined as the process of acquisition of knowledge. Selecting pedagogy encourages teachers to think about who is served by specific curriculum choices and pedagogical practices (Richard,

2021). The results are alarming as more than 35 % of the teachers did not perform to expectation when teaching Physical Education and sports. For pedagogy, teachers engage in specific practices to pass on or reproduce knowledge. In pedagogy, the concept of purpose or intention is crucial. Learning may occur from an encounter or through discovery, however, there is no pedagogy if no intention was there in the process to learn any knowledge. Thus, the best teachers are needed to promote Physical Education.

Analysis and Interpretation of Data to test Hypothesis on Pedagogy for Taking Theory Class for Physical Education and Sports in Secondary Schools of Fiji in Relation to Qualification

The hypothesis regarding qualification was tested using the "t'-test' with the level significance fixed at 0.05 level. The details are given in Table 4.4.03

	N	Mean	Std. Deviation	t	sig
Diploma	76	93.50	23.360	7.018	0.515
Degree	178	73.07	20.287		

Significant at 0.05 level

Table 4.4.03 indicates that the t-value is 7.018 and the p-value is .0.515, which is not significant. Thus, the null hypothesis has been accepted as teachers with the diploma and the degree teaching in Secondary school does not differ significantly in pedagogy towards teaching theory in Physical Education and sports. Other researchers contradict the results as Jennifer (2013) states that teachers with advanced degrees positively impact student achievement in high school. Many academics believe that the qualification of a teacher has a significant impact on student achievement.

Analysis and Interpretation of Data to test Hypothesis on Components of Pedagogy for Physical Education and Sports Theory in Relation to Qualification

Table 4.4.04- Analysis of Variance of Components of Pedagogy while taking Physical Education Theory Class in respect to Teacher Qualification

Component		Sum of Squares	df	Mean Square	F	Sig.
IIL	Between Groups	6086.469	1	6086.469	38.053	0.000
	Within Groups	40306.287	252	159.946		
AF	Between Groups	161.048	1	161.048	32.910	0.000
	Within Groups	1233.177	252	4.894		
SCM	Between Groups	278.523	1	278.523	30.367	0.000
	Within Groups	2311.335	252	9.172		
TMC	Between Groups	1228.680	1	1228.680	41.943	0.000

Within Groups	7382.049	252	29.294	

Introduction and Implementation of Lesson(IIL) Assessment and Feedback (AF), Student/Class Management(SCM) Time Management and Conclusion (TMC)

Table 4.4.04 shows four components of pedagogy and its significance values when comparing qualifications of the teachers. The results show for Introduction and Implementation of Lesson (IIL) has a f-value of 38.05, and a p-value of 0.000 which is significant at 0.05 level. When comparing Assessment and Feedback (AF) provided by teachers the f-value, is 32.367, and the p-value is 0.00. Moreover, it is important to measure Student/Class Management (SCM)the f value of 30.36 and the p value of 0.00 indicates a significant difference in the component. Furthermore, there is a significant difference when comparing degree and diploma teaching time management for theory teaching (TMC), the f-value is 41.9, and the p-value of 0.000 indicates that Teachers with a diploma have better time management, Thus, the alternative hypothesis is accepted. Secondary school Physical Education and sports teachers differ significantly when comparing qualification to Physical Education and sports components.

Analysis and Interpretation of Data to test Hypothesis on Pedagogy for Taking Theory Class for Physical Education and Sports in Secondary Schools of Fiji in Relation to Teachers' Experience

Table 4.4.05 Analysis of Variance of Physical Education and Sports of Physical Education and Sports Teachers related to Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19326.584	3	6442.195	13.803	0.000
Within Groups	116679.086	250	466.716		

Table 4.4.05 shows a significant difference found among the four selected experience categories in this study. These experience categories were under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience. The result f (13.803) was less than the tabulated F (3.81); thus, the alternative hypothesis has been accepted.

Analysis and Interpretation of Data to test Hypothesis on Components of Pedagogy for Physical Education and Sports Theory in Relation to Experience

Table 4.6.06 Analysis of Variance of Components of Pedagogy while taking Physical Education Theory Class in respect to Teacher Experience

		Sum of Squares	df	Mean Square	F	Sig.
IIL	Between Groups	7581.278	3	2527.093	16.278	0.000
	Within Groups	38811.478	250	155.246		
AF	Between Groups	98.435	3	32.812	6.330	0.000
	Within Groups	1295.790	250	5.183		
SCM	Between Groups	192.339	3	64.113	6.685	0.000
	Within Groups	**2397.519**	**250**	**9.590**		
TMC	Between Groups	752.705	3	250.902	7.982	0.000
	Within Groups	7858.024	250	31.432		

Introduction and Implementation of Lesson (IIL) Assessment and Feedback (AF), Student/Class Management(SCM) Time Management and Conclusion (TMC)

It is evident from Table 4.4.06 that secondary school Physical Education and sports teachers under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience differ significantly in components of pedagogy as the significance value for all components are 0.000. To further analyse the data and see the significance among the different levels of experience for the teachers, a Post hoc analysis was done.

Table 4.4.07 - Post-hoc Test Results for pedagogical theory (IIL) Used by Physical Education and Sports Teachers in Secondary Schools of Fiji with respect to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
IIL	< 5	6 - 10	-0.16524	2.20573	1.000
		11 - 15	-10.11450*	2.24977	0.000
		> 16	-12.10566*	2.43289	0.000
	6 - 10	< 5	0.16524	2.20573	1.000
		11 - 15	-9.94926*	2.04375	0.000
		> 15	-11.94042*	2.24374	0.000
	11 - 15	< 5	10.11450*	2.24977	0.000
		6 - 10	9.94926*	2.04375	0.000
		> 16	-1.99116	2.28705	0.820
	> 16	< 5	12.10566*	2.43289	0.000
		6 - 10	11.94042*	2.24374	0.000

	11 - 15	1.99116	2.28705	0.820

Introduction and Implementation of Lesson (IIL)

When comparing teachers' level of experience with pedagogy components as Introduction and Implementation of Lesson, Table 4.4.07 shows no significant difference for teachers with five or less of experience compared with teachers of experience of 6 to 10 years as the calculated p-value is 1.00.

However, when comparing teachers between less than 5 years of experience with greater than 11 years of experience the p-value of 0.00 indicates a significant difference. The younger teachers had a high mean for the introduction of the lesson compared to the experienced teachers. The younger teachers of Physical Education are more technology-oriented, so they use ICT to introduce the lesson. This use of ICT was seen when the researcher was collecting the data. The experience teachers did not have many motivational activities, and they were more concerned with the teaching concepts.

Table 4.4.08 Post-hoc Test Results for Pedagogical Theory (AF) Used by Physical Education and Sports Teachers in Secondary Schools of Fiji with respect to Teaching Experience (table 40)

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
AF	< 5	6 - 10	-0.69658	0.40303	0.311
		11 - 15	-1.60016*	0.41108	0.001
		> 15	-1.48693*	0.44454	0.005
	6 - 10	< 5	0.69658	0.40303	0.311
		11 - 15	-0.90358	0.37343	0.076
		> 15	-0.79035	0.40998	0.219
	11 - 15	< 5	1.60016*	0.41108	0.001
		6 - 10	0.90358	0.37343	0.076
		> 16	0.11323	0.41789	0.993
	> 15	< 5	1.48693*	0.44454	0.005
		6 - 10	0.79035	0.40998	0.219
		11 - 15	-0.11323	0.41789	0.993

Assessment and Feedback (AF)

Table 4.08 shows that when comparing Assessment and Feedback teachers provide to the students; there is no significant difference between teachers with five or less years of experience and teachers with 6 to 10 years of teaching experience with a p-value of 0.311.

However, there is a significant difference between teachers with five or less years of experience and teachers with 11 or more years of teaching experience. The experienced teachers provided frequent and better feedback to the students. The results also show that there is no significant difference between teachers with 11 to 15 years of experience and those with 16 or more years of experience, implying that teachers can be grouped with more than 11 years of experience. Good feedback practices can not only provide students with useful information to help them learn better, but they can also provide teachers with useful information to help them teach better and ultimately help students learn better (Yorke, Jr., 2003).

Table 4.4.09 -Post-hoc Test Results for Pedagogical Theory (SCM) Used by Physical Education and Sports Teachers in Secondary Schools of Fiji with respect to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
SCM	< 5	6 - 10	-0.45726	0.54822	0.838
		11 - 15	-2.08294*	0.55917	0.001
		> 16	-1.81699*	0.60468	0.015
	6 - 10	< 5	0.45726	0.54822	0.838
		11 - 15	-1.62568*	0.50796	0.008
		> 16	-1.35973	0.55767	0.073
	11 - 15	< 5	2.08294*	0.55917	0.001
		6 - 10	1.62568*	0.50796	0.008
		> 16	0.26595	0.56843	0.966
	> 16	< 5	1.81699*	0.60468	0.015
		6 - 10	1.35973	0.55767	0.073
		11 - 15	-0.26595	0.56843	0.966

Student/Class Management (SCM)

Table 4.4.09 shows that when comparing teacher experience for student and class management when teaching Physical Education theory, there is no significant difference as the p value is 0.83 between teachers with less than five years of experience compared to teachers with an experience of 6 to 10 years. But there is a significant difference between teachers with five or less years of experience and 11 or more years of teaching experience for student and class management. However, no significant difference has been found between teachers with 6 to 10 years of experience with 16 or more years of experience as the p-value is 0.073. The results also show that there is no significant difference between teachers with 11 to 15 years of experience and those with 16 or more years of experience as the p-value is 0.966. In general,

the mean of experienced teachers for class management was better than inexperienced teachers. It is naturally true as we get to experience in a field, our management skills get better. In a study on classroom English teachers, it was found that experience teachers had better class management than inexperienced teachers. It was also suggested that teachers needed training for the class management skills (Çakmak, 2019)

Table 4.4.10 -Post-hoc Test Results for Pedagogical Theory (TIMC) on Physical Education and Sports Teachers in Fiji's Secondary Schools with respect to Teaching Experience.

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
TMC	< 5	6 - 10	-2.38604	0.99250	0.079
		11 - 15	-4.40897*	1.01231	0.000
		> 16	-4.41394*	1.09471	0.000
	6 - 10	< 5	2.38604	0.99250	0.079
		11 - 15	-2.02293	0.91961	0.126
		> 16	-2.02790	1.00960	0.188
	11 - 15	< 5	4.40897*	1.01231	0.000
		6 - 10	2.02293	0.91961	0.126
		> 15	-0.00497	1.02909	1.000
	> 16	< 5	4.41394*	1.09471	0.000
		6 - 10	2.02790	1.00960	0.188
		11 - 15	0.00497	1.02909	1.000

Time Management and Conclusion

Table 4.4.10 shows that when comparing teacher experience for time management and conclusion when teaching Physical Education theory, there is no significant difference as the p-value is 0.079 between teachers with less than five years of experience compared to teacher experience from 6 to 10 years. But there is a significant difference with a p-value of 0.00 between teachers with five or less years and 11 or more years of teaching experience for Pedagogical Practice in Time Management and having a sound conclusion of the class. Moreover, there is a significant difference with a p-value of 0.00 between teachers with 6 to 10 years of experience with 16 or more years of experience. The findings also revealed no significant difference between teachers with experience of 11 to 15 years and those with 16 or more years of experience as the p-value is 0.188.

Analysis and Interpretation of Data to test Hypothesis on Attitude Towards Physical Education and Sports with respect to Teacher Type

Table 4.411: T-test Results Comparing Pedagogy for Taking Theory Class for Physical Education and Sports Teachers in Secondary Schools of Fiji in Relation to Teacher Type

Independent Samples Test

Teacher Type		N	Mean	SD	T	Sig.
Specialist	Specialist	115	100.05	12.29	22.77	0.453
Non-Specialist	Non-Specialist	139	61.91	14.05		

Table 4.4.11 indicates that the t-value is 22.77 and the p-value is .0.453, which is not significant at 0.05 level. Thus, the null hypothesis has been accepted as specialist and non-specialist secondary school Physical Education and sports teachers does not differ significantly from pedagogy theory when taking a class in secondary schools of Fiji. Generally, teachers in Fiji schools do a similar type of preparation for the teaching. The Ministry of Education requires them to prepare the lesson plans, workbook and learning and teaching plan for each subject they teach. Teachers prepare a workbook in a week advance on what they will teach the following week (MEHA, 2017). The workbook preparation makes teachers prepare for the lesson whether they are specialists or non-specialist in the subject.

Table 4.4.12- Analysis of Variance of Components of Attitude Towards Physical Education and Sports with respect to Teacher Type

		Sum of Squares	df	Mean Square	F	Sig.
IIL	Between Groups	23738.221	1	23738.221	264.054	0.000
	Within Groups	22654.535	252	89.899		
AF	Between Groups	771.523	1	771.523	312.226	0.000
	Within Groups	622.702	252	2.471		
SCM	Between Groups	1456.107	1	1456.107	323.650	0.000
	Within Groups	1133.751	252	4.499		
TMC	Between Groups	4844.547	1	4844.547	324.155	0.000
	Within Groups	3766.181	252	14.945		

***Significant at 0.05 level**

Table 4.412 indicates a significant difference found among the four components of pedagogy theory with a p-value of 0.000 for Physical Education specialist and non-specialist teachers. Thus, the alternative hypothesis has been accepted. When seeing the components of pedagogy,

the results showed a difference in the means of specialist and not specialist teachers as the specialists are trained in each aspect of teaching physical education in schools. The specialist is also passionate about the subject, so they prepare the lessons well and teach with pride; thus, the components show a significant difference.

Discussion

Teachers' specialized knowledge in maintaining a conducive learning environment for all students is referred as the pedagogical knowledge. This study compared teachers' pedagogy in relation to qualification, experience, and teacher specialty. The results show that teachers' qualifications did not have a significant difference, but the components of pedagogy showed a significant difference for pedagogy when compared to qualifications. Several studies emphasize the significance of teachers' knowledge. Student teachers gain knowledge from practical experiences and academic teaching in the classrooms. Student achievement may also vary due to the level of opportunities offered in teacher training. Teachers in top-performing countries in Pisa and America take advantage of opportunities to learn content and pedagogical knowledge (Corbett and Anderson, 1995).

Furthermore, the results of this study shows that there was a significant difference when comparing the experience of the teachers for pedagogy and its components. As teachers get experienced through the years, they can evaluate their lessons and improve their delivery. The results are supported by other researchers who agree that students' achievements create positive experiences and career aspirations for teachers. The experience is most significant at the beginning of the career for teachers, and it prevails in the second and third decades of career in teaching. The experienced teachers are actively involved in overall students' learning in school rather than focusing only their class (Tara and Anne, 2016). Teachers' decisions are positively influenced by an expansive knowledge base and the extensive experience as they make their decisions by observing and reflecting on student learning and their own practices. It is critical to conduct research and it is widely acknowledged that expansive pedagogical knowledge is required for competence in teaching along with the teaching experience (Loughran,2002). The Post-hoc test gave varied results when comparing the components of pedagogy

4.05 Analysis and Interpretation of Objective 5 To Compare Teachers' Physical Education Practical Class with Teaching Experience, Teacher Type and Teaching Qualification of Physical Education and Sports Teachers in Secondary Schools in Fiji.

The demographic representation for pedagogy for practical Physical Education and sports lesson in secondary schools of Fiji in relation to qualification, experience and teacher type was done in the table to demonstrate each variable and its results.

Table 4.5.01 - Demographic Profile (N=254)

Variable	component	Characteristics	Mean SD	SD	N (%)
Qualification	IPSW	Diploma	26.12	7.44	Diploma - 19% Degree - 81%
		Degree	19.77	5.24	
	DOL	Diploma	42.17	12.36	
		Degree	29.04	10.15	
	TST	Diploma	3.91	0.95	
		Degree	2.82	0.93	
	CCD	Diploma	22.68	6.71	
		Degree	15.03	6.84	
Teacher type	IPSW	Specialist	27.17	5.07	Specialist 45 % non-specialist 55%
		Non-Specialist	17.12	3.69	
	DOL	Specialist	44.43	8.03	
		Non-Specialist	23.49	5.35	
	TST	Specialist	4.12	0.63	
		Non-Specialist	2.35	0.54	
	CCD	Specialist	24.21	4.97	
		Non-Specialist	11.63	3.80	
Experience	IPSW	< 5	17.69	4.51	< 5- 22% 6-10 - 30% 11 -15 - 28% > 16 - 20%
		6 - 10	20.18	4.77	
		11 - 15	24.31	6.57	
		> 16	24.49	8.22	
	DOL	< 5	25.89	7.33	
		6 - 10	28.99	9.85	
		11 - 15	38.37	12.40	
		> 16	39.04	14.07	
	TST	< 5	2.58	0.71	
		6 - 10	2.86	0.85	
		11 - 15	3.57	1.06	
		> 16	3.61	1.22	
	CCD	< 5	13.24	5.35	
		6 - 10	14.81	6.82	
		11 - 15	20.77	7.44	
		> 16	20.69	7.74	

Introduction, preparation, safety, and warm-up (IPSW) Development of a lesson (DOL) teaching skills and techniques (TST) conclusion and cool down (CCD)

Table 4.5.01 reflects the demographic characteristics of study participants on pedagogy for taking a practical Physical Education class. The teachers were observed by the researcher while taking a practical class. The researcher rated the teachers on the questionnaire while the teacher had a practical Physical Education session as prescribed in the curriculum in Fiji. Physical Education practical is great for the development of children (Maher, 2016; Darst, 2014; Balsevich, 2006). Physical activity activates neuropile secretion which boost cognitive processes, adds to the child's self-confidence and mental strength (Trudeau & Shephard, 2010). The practical session gives the opportunity for the children to take responsibility in organizing their physical activity (Gavrilov, Komkov & Malinin, 2005). Furthermore, other researchers have also divided the practical physical education lesson into four parts as the introductory exercise, the fitness component, the lesson emphasis, and the closing game or activity cool down and conclusion (Darst, Pangrazi, Sariscsany, & Brusseau, 2012)

Table 4.5.02 Percentage Level of Pedagogical Practice While Taking a Practical Lesson by Physical Education and Sports Teachers in Secondary Schools in Fiji.

Pedagogy	Mean	N	SD	%
Expectation not met	41.13	16	4.272	6.3%
Satisfactory	70.99	155	12.816	61.1 %
Exceeds expectation	128.12	83	9.296	32.6%

Results from Table 4.5.02 show that 32.6 % of the participants observed for teaching Physical Education practical class exceeded expectation for teaching skills during the practical session of physical education in schools .61.1% percent had satisfactory performance, and 6.3% had expectations not met. The results are not encouraging to promote healthy living among students at secondary schools. The results indicate that Physical Education is devalued due to teachers ' lack of confidence and motivation for practical classes (Siedentop, 1992). The results are similar to other studies done in Abu Dhabi, claiming that most Physical Education curricula are not effective in secondary schools because of the failure to realize educational aims or goals. Many students feel Physical Education classes demoralizes them. The teachers feel, the pedagogy and PE conditions hinder the achievement of the goals of Physical Education. The challenges in Physical Education can be solved by replacing the model the Physical Education is based on (Locke, 1992).

Analysis and Interpretation of Data to test Hypothesis on Pedagogy for Taking a Practical Class for Physical Education and Sports in Secondary Schools of Fiji in Relation to Qualification

The hypothesis regarding qualification was tested using the "t'-test' with the level significance fixed at 0.05 level, as shown in Table 4.5.03

Group	N	Mean	SD	t	P
Diploma	76	110.62	30.730	8.671	0.005
Degree	178	73.07	25.913		

It was evident from Table 4.5.03 there was a significant difference in pedagogy practical for teachers with a degree and diploma as the obtained p-value is 0.005, which is less than the significance value of 0.05. Therefore, the alternative hypothesis has been accepted. The teachers with a diploma had a higher mean than the teachers with a degree because the teachers with the Diploma mainly were qualified Physical Education teachers.

Analysis and Interpretation of Data to test Hypothesis on Components of Pedagogy for Physical Education and Sports Practical in Relation to Qualification

Table 4.5.04- Analysis of Variance of Components of Pedagogy While Taking Physical Education Practical Class with Respect to Teacher Qualification

		Sum of Squares	df	Mean Square	f	p
IPSW	Between Groups	1931.157	3	643.719	17.441	0.000
	Within Groups	9227.064	250	36.908		
DOL	Between Groups	7891.027	3	2630.342	21.219	0.000
	Within Groups	30990.721	250	123.963		
TST	Between Groups	1190.696	3	396.899	16.842	0.000
	Within Groups	5891.671	250	23.567		
CCD	Between Groups	2816.167	3	938.722	19.613	0.000
	Within Groups	11965.361	250	47.861		

Introduction, preparation, safety, and warm-up (IPSW) Development of a lesson (DOL) teaching skills and techniques (TST) conclusion and cool down (CCD)

Table 4.5.04 shows that the f-value for Introduction, preparation, safety, and warm-up during a Physical Education class is 17.44, and the p-value is 0.000, which is significant at 0.05 level. When comparing the lesson's development phase, the f-value is 21.2, and the p-value is 0.00. Moreover, for teaching skills and techniques the f-value is 16.84 and the p-value is 0.00, showing a significant difference. Furthermore, there is a significant difference when comparing degree and diploma teaching conclusion and cool-down activity with the f-value of 19.619 and

the p-value of 0.000. Thus, the alternative hypothesis has been accepted. Physical Education and sports teachers in secondary schools differ significantly in relation to qualification for Physical Education and sports components. The teachers with diplomas attained a higher mean when comparing the components because the teachers with a Diploma were the ones who were well trained for taking Physical Education classes even if they were not Physical Education specialists. The teacher training institution as Fiji College of Advanced Education (FCAE), provided an elective unit of Physical Education to all teachers who were graduating with a diploma in teaching. Therefore, the performance of the teachers with a Diploma was better than the teachers with a degree.

Analysis and Interpretation of Data to test Hypothesis on Pedagogy for Taking Practical Class for Physical Education and Sports in Secondary Schools of Fiji in Relation to Teacher's Experience

Table 4.5.05 Analysis of Variance of Physical Education and Sports Teachers Related to Experience

	Sum of Squares	df	Mean Square	f	p
Between Groups	49129.909	3	16376.636	20.768	0.000
Within Groups	197134.300	250	788.537		

Table 4.5.05 shows a significant difference found among the four selected experience categories in this study. These experience categories were under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience. The result f (20.75) was less than the tabulated F(3.49); thus, the alternative hypothesis has been accepted. **Analysis and Interpretation of Data to test Hypothesis on Components of Pedagogy for Physical Education and Sports Practical Class in Relation to Experience**

Table 4.5.06- Analysis of Variance of Components of Pedagogy While Taking Physical Education Practical Class with Respect to Teacher Experience

		Sum of Squares	df	Mean Square	f	p
IPSW	Between Groups	1931.157	3	643.719	17.441	0.000
	Within Groups	9227.064	250	36.908		
DOL	Between Groups	7891.027	3	2630.342	21.219	0.000
	Within Groups	30990.721	250	123.963		
TST	Between Groups	1190.696	3	396.899	16.842	0.000
	Within Groups	5891.671	250	23.567		
CCD	Between Groups	2816.167	3	938.722	19.613	0.000

Within Groups	11965.361	250	47.861	

Introduction, preparation, safety, and warm-up (IPSW) Development of a lesson (DOL) teaching skills and techniques (TST) conclusion and cool down (CCD)

It is evident from table 4.5.06 that secondary school Physical Education and sports teachers under five years, 6 to 10 years, 11 to 15 years, and 16 or more years of teaching experience differ significantly in components of pedagogy as the p-value for IPSW, DOL, TST and CCD is 0.000. To further analyse the data and see the significance among the different levels of experience for the teachers, a Post hoc analysis was done.

Table 4.5.07-Post-hoc Test Results for Pedagogical Practical (IPSW) used by Physical Education and Sports Teachers in Secondary Schools of Fiji with respect to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	sig
IPSW	< 5	6 - 10	-2.49430	1.07549	0.096
		11 - 15	-6.62467*	1.09696	0.000
		> 16	-6.80501*	1.18625	0.000
	6 - 10	< 5	2.49430	1.07549	0.096
		11 - 15	-4.13037*	0.99650	0.000
		> 16	-4.31071*	1.09402	0.001
	11 - 15	< 5	6.62467*	1.09696	0.000
		6 - 10	4.13037*	0.99650	0.000
		> 16	-0.18034	1.11513	0.998
	> 16	< 5	6.80501*	1.18625	0.000
		6 - 10	4.31071*	1.09402	0.001
		11 - 15	0.18034	1.11513	0.998

Introduction, preparation, safety, and warm-up (IPSW)

When comparing teachers' level of experience with pedagogy component Introduction, preparation, safety, and warm-up (IPWS) during a Physical Education practical class, Table 4.5.07 shows no significant difference with experience of fewer than five years compared to teachers of 6 to10 years as the p-value is 0.096. However, when comparing teachers between less than five years with more than 11 years of experience, a significant difference was found in teachers for IPSW with a p-value of 0.000. The experienced teachers showed a higher mean as they were more versed with the variety of actions that could be taken during the Physical Education class. The results also show no significant difference when comparing 11 to 15 years and greater than 16 years of teaching experience with a p-value of 0.998. Other researchers have a similar finding that the introductory/warm-up activities in the beginning portion of the

session can establish the tone for the duration of the lesson. It also allows children to engage in immediate physical activity upon entering the gym or playing field (David and Teresa, 2019).

4.5.08-Post-hoc Test Results for Pedagogical Theory (DLF) on Physical Education and Sports Teachers in Secondary Schools of Fiji with respect to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
DOL	< 5	6 - 10	-3.09829	1.97101	0.397
		11 - 15	-12.47731*	2.01036	0.000
		> 16	-13.15033*	2.17399	0.000
	6 - 10	< 5	3.09829	1.97101	0.397
		11 - 15	-9.37902*	1.82626	0.000
		> 16	-10.05204*	2.00497	0.000
	11 - 15	< 5	12.47731*	2.01036	0.000
		6 - 10	9.37902*	1.82626	0.000
		> 16	-0.67302	2.04367	0.988
	> 16	< 5	13.15033*	2.17399	0.000
		6 - 10	10.05204*	2.00497	0.000
		11 - 15	0.67302	2.04367	0.988

Development of lesson & fitness (DLF)

When comparing teachers' level of experience with pedagogy component as the development of lesson (DOL), which consists of teaching the skills and fitness and the breaking down of skills in parts for education practical class, Table 4.5.08 showed that there is no significant difference for teachers with experience of 5 years or less when comparing with teachers of 6 to 10 years with a p value of 0.397. However, when comparing teachers between less than five years with greater than 11 years of teaching experience, there is a significant difference with a p-value of 0.000. The experience teachers showed a higher mean as they were more versed with the stages of motor skill development. The experienced teachers were able to break down the motor skills required for an activity well for teaching while the inexperienced teachers focused on the game itself. The results also show no significant difference when comparing 11 to 15 years with 16 or more years of teaching experience as the p-value was 0.988. This result indicates that teachers with 11 years of experience do not differ from teachers with 16 or more years of experience when developing the lesson. One reason for the finding is that the teachers had a more knowledge of the concept and can correct errors made by the students. Research shows that teachers teach physical development and motor abilitiess depending on the students' age, gender, social integration needs, and characteristics. There are two aspects to physical

education development: training and education (Pill, tell 2012). During the Physical Education class, skill-related physical fitness, using power and fitness test are appropriate teaching methodologies that enhance learning and is used by experienced teachers. This use of methods suggests that a careful selection of instructional tactics boosts student achievement during performance and evaluation in a physical education class (Mihaela and Laurentius, 2014).

4.5.09 - Post-hoc Test Results for Pedagogical Practical (TST) of Physical Education and Sports Teachers in Secondary Schools of Fiji with respect to Teaching Experience

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
TST	< 5	6 - 10	-1.40598	0.85939	0.360
		11 - 15	-4.95618*	0.87655	0.000
		> 16	-5.16993*	0.94790	0.000
	6 - 10	< 5	1.40598	0.85939	0.360
		11 - 15	-3.55020*	0.79628	0.000
		> 16	-3.76395*	0.87420	0.000
	11 - 15	< 5	4.95618*	0.87655	0.000
		6 - 10	3.55020*	0.79628	0.000
		> 16	-0.21375	0.89108	0.995
	> 16	< 5	5.16993*	0.94790	0.000
		6 - 10	3.76395*	0.87420	0.000
		11 - 15	0.21375	0.89108	0.995

teaching skills and techniques (TST)

Physical Education teachers' responsibility is to teach students skills and activities that they can use outside of physical education class to function as physically active students out of school. When comparing teachers' level of experience with pedagogy component teaching skills and techniques (TST), Table 5.09 shows no significant difference for teachers with five or less years of experience compared with teachers of 6 to 10 years. However, a significant difference was found in when comparing teachers with five or less years of experience with 11 or more years of experience as the p-value is 0.000. The experience teachers showed a higher mean as they were more versed with the skill and technique development. The experienced teachers were able to take the skills from simple to complex, while the inexperienced teachers focused on the sports they played. The results also show no significant difference when comparing 11-15 and greater than 16 years of teaching experience with a p-value of 0.995. This finding indicates that teachers after 11 years of experience do not differ from teachers with 16 or more years of experience.

Analysis and Interpretation of Data to test Hypothesis on Pedagogy for Practical Class with Respect to Teacher Type

Table 4.5.10 T-test Results Comparing Pedagogy for Taking a Practical Class for Physical Education and Sports Teachers in Secondary Schools of Fiji with Respect to Teacher Type

Teacher Type	N	Mean	SD	t	sig
Specialist	115	116.57	20.53	24.67	0.000
Non-Specialist	139	63.96	13.19		

Table 4.5.10 indicates that the t-value is 24.67 and the p-value of 0.000, which is significant at 0.05 level. There is a significant difference in specialist when compared to non-specialist Physical Education teachers when taking a practical class. Thus, the alternative hypothesis has been accepted. The considerable difference in the mean indicates that the specialist handled the practical class better than the non-specialist teachers. Other research on curriculum studies states that non-specialist teachers perceived difficulties in teaching Physical Education. Non-specialist classroom teachers generally emphasize on games that learners typically love and that may be adopted easily without a high level of specific content understanding (Quay and Peters, 2008). Since non-specialist teachers are not trained to teach the curriculum, they find it easier to focus on games only.

Table 4.5.11 Analysis of Variance of Components of Pedagogy for Practical Class with Respect to Teacher Type

ANOVA

		Sum of Squares	df	Mean Square	f	Sig.
IPSW	Between Groups	6347.439	1	6347.439	332.494	0.000
	Within Groups	4810.782	252	19.090		
DOL	Between Groups	27586.892	1	27586.892	615.492	0.000
	Within Groups	11294.856	252	44.821		
TST	Between Groups	4919.725	1	4919.725	573.267	0.000
	Within Groups	2162.641	252	8.582		
CCD	Between Groups	9963.989	1	9963.989	521.205	0.000
	Within Groups	4817.538	252	19.117		

Introduction, preparation, safety, and warm-up (IPSW) Development of a lesson (DOL) teaching skills and techniques (TST) conclusion and cool down (CCD)

Table 4.5.11 shows a p-value of 0.00 for the four components of pedagogy practical of specialist teachers when compared to the non-specialist Physical Education teachers. Thus, the alternative hypothesis has been accepted. When it comes to teaching skills and fitness, many non-specialist classroom teachers are opposed to active games time that children need.

Compared to skill exercises or fitness training sessions, games have a greater personal significance for children, resulting in greater enthusiasm and increased participation. Unlike a skill drill or exercise session where the primary motivation is to perform against specific performance benchmarks, a game is essentially a social event, as shown in the table for the components of pedagogy practical (Faucette, McKenzie, & Patterson, 1990, p. 291). Children can be marginalized in these settings where they are put in a competitive game situation that, for many is removed from reality. The study is like the study done in Australia where the authors raise the concern of non-specialist teachers taking a Physical Education class (Spence et al., 2004). The concerns raised in the study included the teaching methods and approach used to get the outcomes in a way that does not take into account the children's interests or needs. Therefore, the study showed that teachers failed to create situations where learners can engage in physical activities that are meaningful. Skills and fitness are important outcomes for students to achieve in Physical Education, which specialist physical education teachers shall take.

Discussion

The findings of this study shows that only 61.1 % of the teachers had satisfactory Physical Education and sports practical class, probably due to the teachers in the study being specialist and non-specialist teachers. Teachers having a diploma had a higher average for pedagogy as these are the teachers who are mostly specialist in Physical Education. Over the past two decades, several studies in Australia have highlighted fear about teachers' lack of confidence and credentials to effectively execute PE.

Furthermore, teachers who are non-specialist lack confidence in giving instruction in PE class. The lack of conviction is linked to proper execution of skills related activities in PE class (Carney and Chedzoy, 1998). However, the non-specialist teachers believe in the value of PE curriculum (Alfrey, 2017). It was discovered that non-specialists' teachers realize the advantages of PE but choose to teach other courses as they lack knowledge and skills (DeCorby et al., 2005). However, the researches have highlighted favorable impressions in teaching of physical education ensure that kids would get excellent PE or gain needed knowledge and abilities (Beini et al, 2017).

Several studies have proven non-specialists give incorrect lesson material and merely provide "guided play" in ill-coordinated sessions (Hardman & Marshall, 2001). Further research have portrayed classroom instruction as pupil engaged. However, non-specialists take lessons with

game-like tasks with hardly any skills practice (Faucette & Patterson, 1989; Faucette et al., 1990), so others have observed detrimental repercussions of such programs. PE lessons which have sports or games are clearly not appropriate for the learners (Ashton, 1988). The sports benefits only those with exceptional abilities. (Armstrong & McManus, 1994). There is little to no success (Macfadyen, 1999), especially for many students at a social disadvantage (Evans & Roberts, 1987). Many students do not participate in physical activities outside of school so having major sports in PE class as free play is inappropriate PE pedagogy (Sallis & McKenzie, 1991).

4.06 Analysis and Interpretation of Objective 6

To study the relationship between pedagogy and teacher effectiveness

$H_{06.1}$ It was hypothesized that there exists no significant relationship between teacher effectiveness and pedagogical practice in teaching of Physical Education and sports in secondary schools of Fiji.

Table 4.6.01 Linear Correlation for Relationship between Secondary School Physical Education and Sports Teachers' Pedagogical Practical Skills and Teacher Effectiveness towards Teaching.

Correlations			
		Effectiveness	Pedagogy
Effectiveness	Pearson Correlation	1	.886**
	Sig. (2-tailed)		0.000

4.6.02- Graph for Linear Correlation for Relationship between Secondary School Physical Education and Sports Teachers' Pedagogical Practical Skills and Teacher Effectiveness towards Teaching.

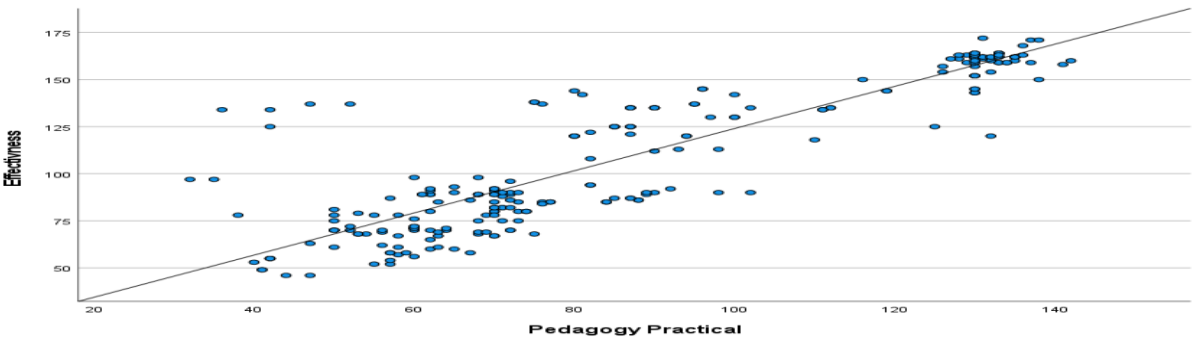

Table 4.6.01 indicates a strong positive correlation (r=0.886) between teacher effectiveness and pedagogy of teachers of Physical Education and sports in secondary schools as r is closer to positive 1. This correlation is significant with p-value of 0.000. Thus, the null hypothesis has been rejected, and the alternative hypothesis has been accepted. The table shows a significant relationship between teacher effectiveness and practical pedagogy of teachers of Physical Education and sports in secondary schools.

The review of studies revealed that an effective teacher must be willing to make tough moral decisions, use sound judgment, and respect the mission's inherent complexity. It is important to recognize and acknowledge a broad variety of requirements and situations to support the development of abilities, attitudes and understanding. To this end, educators need to develop a diverse set of skills in pedagogy to be effective. Effectiveness and pedagogy are strongly correlated, either for theory or practical class in any situation. (Bhowmik et al., 2013) Furthermore, effective pedagogical teaching demonstrates talents in developing a curriculum that builds on skills and knowledge of students to process ideas and information that are complex. Furthermore, pedagogy aids in the development of a diversity of techniques used in instructions and resources to suit the varied abilities of learners and give the learners avenues for studying significant ideas, skills, and concepts (Simmons Banister, 2015).

4.07 Analysis and Interpretation of Objective 7

To assess the relationship between attitude towards Physical Education and teacher effectiveness.

$H_{07.1}$ It was hypothesized that there exists no significant relationship between teacher effectiveness and teachers' attitude towards Physical Education in teaching of Physical Education and sports in secondary schools of Fiji.

Table 4.7.01 Linear Correlation for Relationship between Physical Education and Sports Teachers' Effectiveness and Attitude towards Teaching in Secondary Schools

Correlations			
		Effectiveness	Attitude
Effectiveness	Pearson Correlation	1	.948**

	Sig. (2-tailed)		0.000

Graph 4.7.02 Linear Correlation for Relationship between Physical Education and Sports Teachers' Effectiveness and Attitude towards Teaching in Secondary Schools

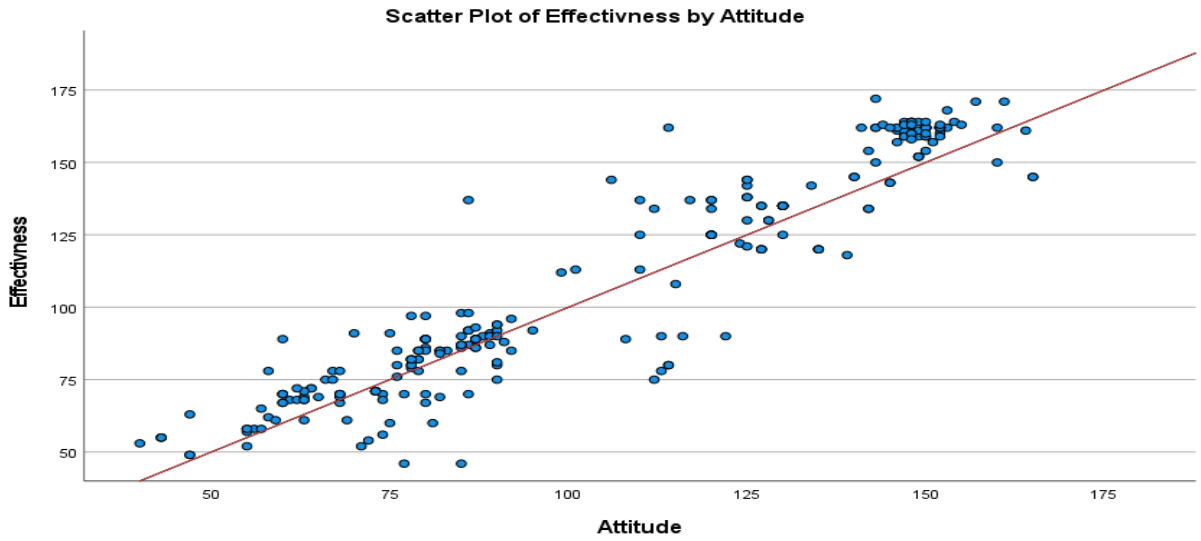

Table 4.7.01 indicates a strong positive correlation (r= 0.948) between teacher effectiveness and their attitude towards teaching of Physical Education and sports in secondary schools of Fiji. There exists a significant correlation with p-value of 0.000. Thus, the null hypothesis has been rejected, and the alternative hypothesis has been accepted. The table shows that a significant relationship exists between teacher effectiveness and attitude towards teaching of Physical Education and sports in secondary schools of Fiji. The reason for this outcome probably is the teacher's passion for the subject. Many Physical Education teachers opted for this profession to sustain their interest in Physical Education and sports, and this result suggests that they are effectively engaging in teaching due to their interest in this field. The specialist teachers of Physical Education and sports have a more positive attitude. They showed to be very passionate about the profession and were highly effective. Those teachers who scored less in attitude also scored less in teacher effectiveness. Thus, it showed a positive correlation.

Furthermore, according to the American Commission on Teacher Education, the essence of a country is determined by the essence of its population. The quality of population is dependent on education. The instructors determine the quality of education. Teachers' quality, skills, and character are undeniably important. If this is the case, the efficacy of teachers becomes a critical

issue for the educators and researchers. There are a variety of elements that determine teacher effectiveness. The attitude towards teaching is crucial for the proper operation of any teaching-learning institution. No institution can fulfil its goals unless and until individuals who work there are self-assured and have a positive attitude about their work (Dabas, 2011).

Moreover, the effectiveness of teaching is determined, among other things, by teachers ' attitudes about their job. To make the teaching-learning process more effective and thriving in the teaching profession, a teacher must enjoy the profession and carry out the teaching task voluntarily and passionately and gain pleasure from the job (Krishnappa, 2013).

4.08 Analysis and Interpretation of Objective 8

To assess the relationship between content knowledge and pedagogy towards teaching Physical Education and sports in Fiji.

$H_{08.1}$ It was hypothesized that there exists no significant relationship between teacher's content knowledge and pedagogy towards teaching of Physical Education and sports in secondary schools of Fiji.

Table 4.8.01 Linear Correlation for Relationship between Teachers of Physical Education and Sports in Secondary Schools and Knowledge and Pedagogy of Theory Class When Taking Physical Education in Secondary Schools of Fiji.

Correlations			
		Knowledge	Pedagogy
Knowledge	Pearson Correlation	1	.693**
	Sig. (2-tailed)		0.000

Graph 4.8.02 Linear Correlation for Relationship between Teachers of Physical Education and Sports in Secondary Schools and Knowledge and Pedagogy of Theory Class When Taking Physical Education in Secondary Schools of Fiji.

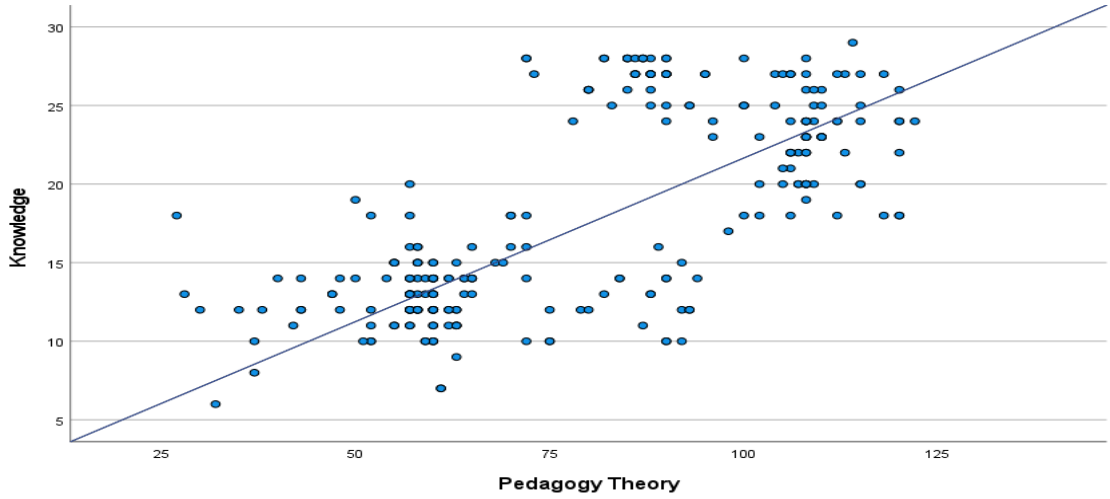

Table 4.8.01indicates a positive correlation (r= 0.693) between teacher content knowledge and pedagogy of Physical Education and sports teachers in secondary schools of Fiji. This correlation is significant with p-value of 0.000. Thus, the null hypothesis has been rejected, and the alternative hypothesis has been accepted. The table reveals an existence of significant relationship between subject matter knowledge and pedagogy of Physical Education and sports teachers in secondary schools of Fiji. It is evident that the sample had specialists and non-specialist teachers of Physical Education, and there was a significant difference in content knowledge. Therefore, the specialist teachers had better content knowledge and the pedagogy, shown by the positive correlation. It reflects that the content expert is able to teach more effectively.

According to some studies, a clear boundary between pedagogy and subject matter knowledge may not exist since content changes in from teacher to teacher (Tobin, Tippins, & Gallard, 1994). However, the student-teachers with little or incorrect information may pass on their misunderstandings to their pupils (Hashweh, 1996), adding to conceptual challenges students face (Even, 1993). Kaya (2008) discovered a considerable correlation between pre-service science teachers' subject content and pedagogical expertise. Similarly, numerous investigations, like Halim and Meerah (2002) and Van and Verloop (2002), found that subject matter knowledge affected pedagogy. According to Mapolelo (1999), however, content

knowledge did not influence pedagogy. The impact of subject knowledge on pedagogy is debatable. This study acknowledges the existence of correlation between the two.

4.09 Analysis and Interpretation of Objective 9

To assess the relationship between content knowledge and attitude towards teaching Physical Education and sports in Fiji.

$H_{09.1}$ It was hypothesized that there exists no significant relationship between teachers' content knowledge and attitude towards teaching of Physical Education and sports in secondary schools of Fiji.

Table 4.9.01 Linear Correlation for Relationship between Physical Education and Sports Teachers' Knowledge and Attitude towards Physical Education in Secondary Schools of Fiji.

Correlations			
		Knowledge	Attitude
Knowledge	Pearson Correlation	1	.723**
	Sig. (2-tailed)		0.000
	N	254	254

Graph 4.9.02 Linear Correlation for Relationship between Physical Education and Sports Teachers' Knowledge and Attitude towards Physical Education in Secondary Schools of Fiji.

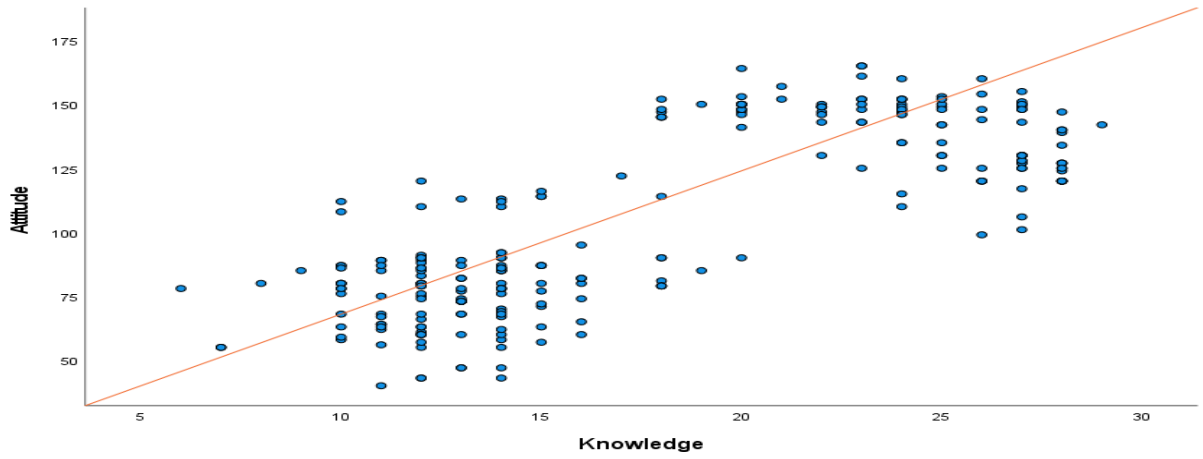

Table 4.9.01 indicates a positive correlation (r= 0.723) between teacher content knowledge and attitude towards teaching of Physical Education and sports in secondary schools of Fiji. There is existence of significant correlation with p-value of 0.000. Thus, the null hypothesis has been rejected, and the alternative hypothesis has been accepted. The table indicates an existence of

There is a significant relationship between subject matter knowledge and attitude towards teaching of Physical Education and sports in secondary schools of Fiji. Result shows that the teacher's command or mastery over the content shows a positive attitude towards the teaching.

Attitudes are formed through education and modified by content knowledge using several tactics. Once developed, attitudes influence the experiences an individual has with an item, topic, or person. Teachers' attitudes evolve gradually, yet they are continually exposed to new experiences (Adesina and Akinbobola, 2005). Attitude refers to an individual's propensity to react favourably or unfavorably to an item or situation. Attitudes may be good or bad. Social psychologists differentiate and investigate three types of responses. Firstly, the cognitive component is information about the attitude for something, depends correct or not. Secondly, the affective component is emotions toward things. Finally, the behavioral component includes action performed affecting the things.

There is also the possibility that attitudes might be matched with a person's actions (Fishbein, 1967), suggesting that behaviours can influence attitudes, and attitudes influence attention (Hoffman, 1986). As a result, one's attitude may affect one's perceptions and ability to learn. The fact that one knows something does not always mean the person will act in a certain way (Ajzen & Fishbein, 1977; Beavers, Kelley, & Flenner, 1982). As a result of these considerations, one might infer that the knowledge, attitude, and behaviour share a dynamic and reciprocal type of link

4.10 Analysis and Interpretation of Objective 10

To access the relationship between attitude towards teaching Physical Education and pedagogy in teaching of Physical Education and sports in Fiji.

$H_{10.1}$ It was hypothesized that there exists no significant relationship between teachers' pedagogy and attitude towards teaching of Physical Education and sports in secondary schools of Fiji **Table 4.10.01 Linear Correlation for Relationship between Secondary School Physical Education and Sports Teachers' Attitude and Pedagogy towards Teaching Physical Education in Secondary Schools of Fiji.**

Correlations			
		Attitude	Pedagogy
Attitude	Pearson Correlation	1	.780**
	Sig. (2-tailed)		0.000

Graph 4.10.02 Linear Correlation for Relationship between Secondary School Physical Education and Sports Teachers' Attitude and Pedagogy towards Teaching Physical Education in Secondary Schools of Fiji.

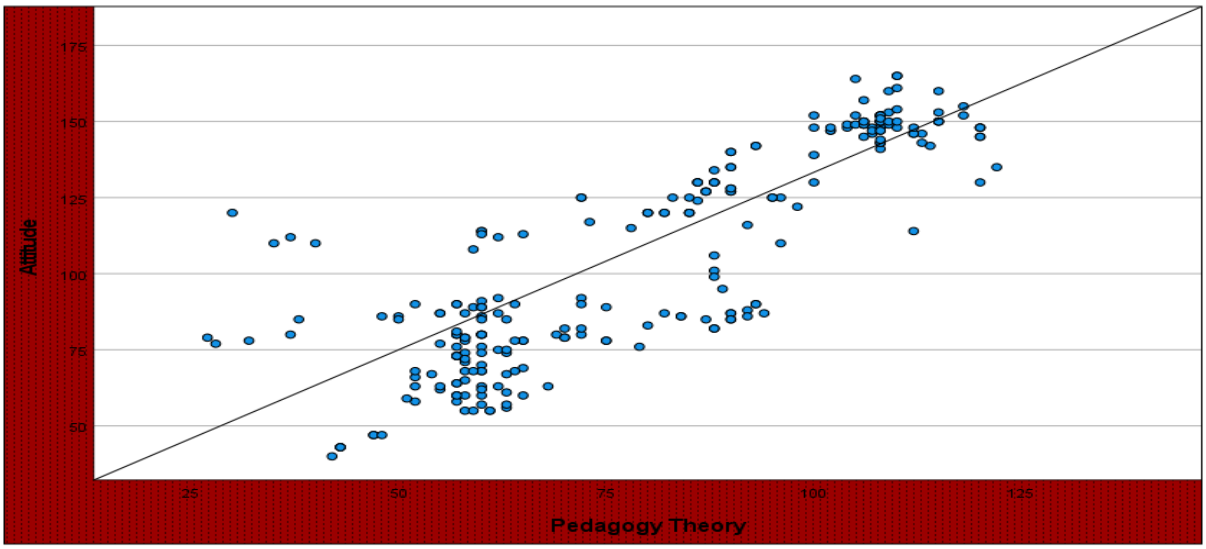

Table 10.01 indicates a positive correlation (r= 0.780) between pedagogy and attitude towards teaching of Physical Education and sports in secondary schools of Fiji. There is existence of significant correlation with p-value of 0.000. Thus, the null hypothesis has been rejected, and the alternative hypothesis has been accepted. The table shows that a significant relationship existed between pedagogy and attitude towards teaching of Physical Education and sports in secondary schools of Fiji. It is often observed that teachers with a positive attitude towards the subject are passionate about teaching it. They would deploy different methods to induce the skills in the children they teach. The finding is similar to the research in Kenya showing a positive relationship between pedagogy and attitude. The process of teaching is influenced by teachers and school administrators' attitudes in the study of Mathematics and Sciences in Secondary Education programs. The results showed that individuals who still have a negative

attitude toward the teaching did not have good pedagogical skills (Caroline, 2017). Another study by Waititu and Orado (2009) found that the reality in the classroom was quite the reverse. 90% of the time, the teacher was the one speaking in the lesson. As the teacher's attitude was negative, so pedagogy was ineffective. As a result, students could only carry out the experiments and conclude half of the time, leaving them little time for other activities. As a result, the teaching methods in this research were only partially implemented. Studies like Dylan (2007), Cuban (2009), and Yero (2002) show a high correlation between teachers' attitude and the pedagogy practices. Teachers' favorable sentiments regarding classroom procedures were shown to be inconsistent with their degree of implementation.

Chapter V

Summary, Conclusion and Suggestion

Attitude of Teachers towards Physical Education

Teaching, being a dynamic activity, requires a positive mindset as well as some specialized abilities from its practitioners. The teachers are able due to positive attitudes for teaching. The optimistic outlook creates conducive and leaner-centred atmosphere in the class which positively impacts the children' pace of acquisition of knowledge. From the perspective of a social construct, attitude gets impacted by a variety of characteristics such as teachers experience, qualification, and the teacher type. To investigate each of the components, a study on teachers' attitude towards Physical Education was carried out using the standardised questionnaire. The study in a nutshell revealed that majority of the teachers have moderate attitude towards Physical Education. These were the teachers who taught Physical Education and sports in the school. This shows that not all teachers were not passionate for Physical Education. Very few Physical Education teachers want to have their children becoming Physical Education teachers which clearly indicates that being a Physical Education teacher is not a number one priority area for the teachers.

Furthermore, the study showed that the qualification of the teachers made a difference in the attitude level of the teachers. Teachers with a Diploma had a higher attitude than teachers having a degree. This was mainly due to the reason that teachers with Diploma qualification were mostly the teachers who were the specialist in Physical Education in secondary schools of Fiji. Moreover, the teacher's attitude towards learning Physical Education was high among the specialist teachers compared to the non-specialised teachers. Therefore, it can be concluded as that the specialist teachers are more passionate towards the subject and had a better attitude towards teaching the subject. Ministry of Education Fiji should provide more specialist Physical Education and sports specialist in secondary schools to take the subject. Physical Education class should be taken by the specialist as any other subject on the school timetable are only taken by the specialist in those areas. Teaching of Physical Education should not be an exception that it should not be used to create the workload of the teachers in the school.

Nobody is born with attitude. Life experiences shape the attitude and behaviour of an individual toward a profession. As a result, one's attitude has a significant impact on one's actions. There are three components of an individual's attitudes which include three: affective that is feelings

or emotions, cognitive that is beliefs or ideas, and psychomotor that is behaviour towards someone or something. If a teacher has a bad attitude, the person will not be able to achieve in his career. The teacher's intellectual views, emotional responses, diverse habits, and personality, which encompass all of these, have an impact on how the students perceive learning. Good attitude of teachers towards the subject will promote student learning and participation in physical activity. In order to promote good health and active lifestyle among the students, the Ministry of Education must provide qualified Physical Education specialists to teach Physical Education at all levels in secondary schools. The present scenario of having one or two Physical Education specialists in secondary school and allowing other teachers to with no qualification and experience in Physical Education will adversely affect the subject and will reduce the interest among the students taking part in Physical Education.

A teacher's profession has its stress; however, the teacher's attitude has a wide range of impact on the students' learning experiences. Rather than concentrating on it, one must look for good solutions to relieve the tension. Complaining about how horrible one's day was will not improve the following day. So, it is best to figure out what went wrong and attempt to fix it. It bothers the educators when their pupils do not perform the assigned physical activity. Instead of dwelling on what went wrong, the educators prepare themselves emotionally, psychologically, and physically for the following day. Having a good Physical Education class leads a child to have healthy life and a good healthy society.

Some of the suggestion made by researcher for improvement of attitude towards Physical Education and sports:

- Organize Professional Development workshops for cluster groups in which teachers may freely discuss their experiences with other teachers and the groups can identify methods to assist one another in attempting to change teachers' attitudes towards physical education and sports.
- Provide a mentorship mechanism for instructors to assist teachers who have a negative attitude toward physical education and to track development.
- The school administrators shall Create a positive learning environment and make learning fun the prospective teachers will have a positive attitude
- Make learning physical education pleasant and create a good learning atmosphere, for future instructors to have a positive attitude.

- The teacher training institutes shall provide an exciting programme to attract prospective students who are passionate for physical education.
- Provide opportunity to teachers to share experience in cluster group and support each other.

5.03 How to improve Teacher effectiveness

Teacher effectiveness is defined as the ability to keep students engaged in the subject matter and have a significant influence on the development of their cognitive, motor, and emotional domains. Developing professional standards for Physical Education in Fiji is necessary to guarantee their efficacy in teaching the curriculum of Physical Education. The subject should aim to promote healthy living, patriotic citizenship, sports participation and reduce non-communicable disease in the country. Additionally, a teacher cannot overlook the knowledge, abilities, and attitudes for students to be successful in the classroom. A competent teacher is armed with subject content knowledge and effective pedagogical practices. The positive attitude and personality of educators is critical to effective classroom practices. To be an effective teacher, one must have a high degree of personal dedication, self-confidence, analytical and conceptual thinking skills, enthusiasm for learning, adaptability, initiative, and responsibility.

The results of the research showed that 45 % of the teachers were highly effective, and 48 % were on average for teacher effectiveness, it is not only the content knowledge which is required to be a good teacher. The research showed that the specialist teachers had a better content knowledge than the non-specialist teachers but when comparing their effectiveness there was no significant difference. Even though there is a plethora of methods for instructing successfully, excellent teachers have a few characteristics. They are well-prepared, communicate clearly and fairly, have a good outlook, show patience with their pupils, and regularly evaluate their own teaching. Because children learn in a variety of ways, teachers may adapt their lesson plans accordingly. Teachers are role model in the field and in the classroom, how teachers perceive Physical Education will reflect in the students. Students doing Physical Education are more likely to reciprocate if educator displays excitement and devotion. To be effective in the classroom, teachers must demonstrate leadership qualities, and effective teaching that involves a set of teaching behaviors that are particularly powerful in achieving desired outcomes in an efficient manner. The classroom learning requires the actions of a teacher who is a leader. To be effective as a teacher, one does not need to be an expert; the

educator only needs to have an aptitude for teaching and an open-minded approach towards teaching.

According to the data, it can be concluded that the efficacy of instructors is strongly linked to their attitudes about teaching. This suggests that instructors who have a positive outlook on their work as educators are more likely to be productive in their roles as educators and other aspects of school life. A substantial difference in attitudes about teaching between competent and ineffective instructors was identified in the current research. Effective instructors have a better mood than ineffective ones, according to the results. It is obvious from the data that some instructors succeed in the classroom because they have a positive outlook on the job. As a result, instructors' professional attitudes may have an influence on how well they educate.

Some of the suggestion made by researcher for Physical Education and sports teachers are for effectiveness:

- Teacher should master the content to be taught in secondary schools and upgrade their knowledge of the subject.
- Teacher needs confidence does not depend to script during teaching of games skills.
- Teachers must break down the games skills and teach in parts, let students practice so that later the student reaches the autonomous stage.
- Teacher should master ICT skills as it enhances learning.
- Teacher should prioritise PE subject, maintaining high standard of teaching, ensuring that the subject is not used for any other subject teaching or exam preparation.
- The teacher should oversee the classroom and students and not depend on students to oversee activities.
- The teacher must be both humorous as well as authoritative, so that the teaching and learning process is more enjoyable and successful. If a kid does not want to participate in Physical Education exercises because they forgot their P.E. clothing, the instructor should deal with the issue firmly.
- As a Physical Education teacher, one should build a teaching practice model based on professional standards.

5.04 Suggestions for Content Knowledge

Knowledge of the subject matter to be taught by the teacher is referred to as "content knowledge" A person's understanding of concepts and theories as well as the methods and

procedures that contribute to their development are included in this category. Teachers who have good content knowledgeable about physical education will have a considerable impact on student success, Nevertheless, there are still teachers in Fiji who lack content knowledge which will make them effective in their classrooms. The study showed that 50 % of the teachers had average content knowledge, the content knowledge of the physical education teachers was tested through the 30 multiple choice questions which consisted of the curriculum which the teachers taught, 38% of the teachers achieved over 90 % in the test. when comparing the qualification of teachers, the teachers with a Diploma had a higher score than the teachers with a degree, this was due to the fact that the teachers who had diploma were mostly Physical education specialist or had graduated from Fiji Collage of advanced education where they have done a unit in physical education as an elective thus, they had a grater knowledge for the curriculum for physical education.

Furthermore, dispositional and behavioural approaches to the conceptualization and assessment of teachers' professional competence has two separate theoretical approaches to the conceptualization and evaluation of content knowledge. Approaches which focus on the total of cognitive and motivational resources assume that these numerous components are required for effective teaching. Competencies may be utilized to predict behaviour in criteria scenarios from this viewpoint. In the context of a given task, behavioural techniques focus on how cognition, emotion, motivation, and performance are connected as a system. From this perspective, competence is a person's ability to perform well under pressure in real-world scenarios, as shown by their actions. The result showed that experience teachers had a better knowledge of the curriculum, but the very experience had scored less marks. The curriculum for physical education has been reviewed there for the teachers with more than 15 years of experience showed a lower level off content knowledge because they may not have upgraded their qualification or attended workshops to familiarise themselves from the new curriculum.

Moreover to improve content knowledge the following recommendation are given:

- Allocate funding to organize Professional Development workshops for teachers on subject knowledge components of physical education and sports in all education districts in Fiji
- Review the curriculum in consultation with all the stake holders
- Invite experts in the field of physical education to take profession development in schools.
- Review of the number of students per teacher in a physical education practical class

- Have physical education assessment theory and practical at all levels and include that in the marks card.
- Have a teacher exchange programme within districts to swap teachers with experience to other schools

5.05 Strategies for Improving the Quality of Physical Education

1. The PE curriculum like other curriculum should map out what should be taught and how the PE knowledge and skills should be assessed. The curriculum should be revised and teaches shall be provided with in-service training on the content knowledge by the universities.

2. Curriculum should include the standard assessment criteria to evaluate students' achievement of the learning outcomes. This should be part of the records on the marks card.

3. Replacing competitive sports or activities that tended to provide a zeal for competition which promotes only elite athletes to compete however, the rest of the students are left out. There is no focus on skill and theory for Physical Education.

4. Adding fitness and circuit training in the curriculum and train teachers on the content knowledge. Ultimately, this would help in reducing NCD in the country.

5. Provide professional development in terms of well-designed training, upgrade of qualifications, workshops and seminars on knowledge, skills and practices in PE and sports.

6. Increase engagement of students in physical activity and decrease the time spent on classroom management and administrative tasks.

5.06 Pedagogy and way forward

Pedagogy is a phrase that applies to both the theory and practice of how the educators teach. As an educator's teaching philosophy, pedagogy focuses on how to culture and various learning methods to interact with the students during the Physical Education and sports class. To assist students, build on what they have already learned, it is critical that teachers use a broad variety of educational tactics to see that students have adequate opportunity to learn. It is important to know what motivates students with their surroundings to participate in meaningfully Physical Education class. The researcher observed the Physical Education practical and theory class of the teachers. The questionnaire could measure introduction, preparation, safety, warm-development of a lesson, teaching skills and techniques, conclusion, and cool down aspects of

the class. The researcher also observed the theory and practical class of teachers of Physical Education and sports in Fiji. The results indicate that the Physical Education specialist teachers had better skills of teaching than the non-specialist teachers. The teachers with a Diploma qualification had a high average on pedagogy than teachers with a degree. This was due to that teacher with a diploma were mostly the Physical Education specialist who had learnt the ways to teaching Physical Education in the teacher training institution. Furthermore, when seeing the experience of the teachers teaches with more than 5 years of experience had high mean for pedagogy. Moreover, when doing a correlation test it was evident that there was a positive correlation of pedagogy and teacher effectiveness, as well as a positive correlation for knowledge and pedagogy. The researcher would suggest the following techniques for taking Physical Education class.

1. Learning with the Head, Heart, and Hands: Students are not overwhelmed by a big quantity of knowledge at once since the technique splits learning into three sections, making the strategy easier to use in the classroom. Rather than only thinking about the game's strategy and regulations, players must also consider their emotions and ideas, as well as their physical abilities to play tag rugby (physical dimension). Children's physical, emotional, and cognitive development are all considered in this "whole child" approach.

2. The play-teach play pedagogy (PTP): To teach games using play-teach play technique. It is suggested that playing the game first helps both children and teachers grasp the connection between practice and play. The method was selected since it encourages players to work together in order to have a better grasp of a subject. Groups of students work together to solve a problem and come up with appropriate tactics. "Children can easily grasp what and why they need to practice". Play teach method encourages students to take responsibility for their own education and are given the freedom to control their own activities. Individual growth is aided by the play-teach-play method, which allows students to practice their abilities in the contexts they will be employed in, enhancing their tactical grasp of those skills.

3. **Teaching by Invitation:** It is a method of teaching that is like the guided-discovery methodology. By inviting participants to pick from a variety of tasks that all focus on the same skill, teachers can tailor their lessons to individual needs. Like guided exploration, teaching by invitation may be utilized when the instructor wants to focus on bringing the students through a series of movement tasks or abilities**.**

4. Making Learning Personally Relevant: Learning is made personal by making it meaningful to participants on an emotional, bodily, and cerebral level, thereby adopting a holistic approach to teaching. Using this method, teachers may show students the similarities between Physical Education (PE) activities and various types of sports and games. The goal is to help students make sense of their own personal experiences. This method is intended to help youngsters make connections between activities and learning, as well as enhance their knowledge of what they are doing, and how it relates to what they are learning.

5. Reflective teaching: Reflections are a first-hand description of a student's experiences and emotions, which may be written or spoken. Physical Education should no longer be created in a practical or utilitarian manner. Instead, it should leave this new experience wide open to the conceptualizations from each individual person. This understanding will be important in giving meaningful Physical Education to the students. To help teachers develop meaningful activities for students, participants' narratives of learning may be utilized since "children's thinking is enmeshed in a context that has some significance to them". Participants are encouraged to internalize their experiences and derive meaning from the action by pausing and reflecting throughout their Physical Education class. For students to engage in the reflection pedagogy, they must reflect in-depth on the activities they have participated in personally. An activity's evaluation and reflection by the participants is critical. When an occurrence and an individual's response to it are tied together, "Meaning is produced" in the mind of the observer. Reflection, class discussion, and think-pair exchange may all be used to create a more meaningful learning environment.

5.07 Recommendations

1. Political will to bring about a change in the culture and environment of how Physical Education is administered in Fijian secondary schools, the physical education platform shall be set form the primary schools where the specialist teachers shall be teaching physical education and sports.
2. A cabinet paper outlining in detail the paradigm shift in Learning and Teaching of PE is recommended. It needs to be done in consideration of the national issues that can be tackled with effective Physical education class in schools. Issues that can be attempted to solve or at least create awareness that will address obesity Chronic NCDs: Such as diabetes and hypertension through emphasis on physical education classes, that

incorporates proper regime, balanced and healthy diet and general well-being of an individual and the community at large.

3. It is also recommended that this white paper also embeds values and civic education that will develop the child holistically and promote vibrant individual for the betterment of the individual as well as prosperity of the nation.
4. It is recommended that at the Ministry of Education level policies to be developed that creates the space, mindset and sets out clear process and procedures in the learning and teaching of PE in Fijian Secondary schools. The time allocated for Physical education is 2 x 40 mins which is far less than other academic subjects, which devalues physical education and sports in schools, physical education shall be given the same amount of time as any other subject in the schools .
5. Many school administrators have started to limit physical exercise in schools. To boost academic attainment, recess has been reduced to a few minutes every day. Physical education courses are also becoming rarer. However, studies demonstrate that recess and physical education in schools are important for children's development, not simply for preventing obesity and other weight-related concerns. Regular exercise improves blood circulation throughout the body, which improves concentration and academic performance. The students shall have longer recess and lunch hours to allow physical activity to take place during this time
6. Policies that will make it mandatory and put the required emphasis in the learning and teaching of PE in the Fijian Secondary Schools. It is recommended that the policies be developed in close consultation with relevant stakeholders for ownership and successful implementation and sustainability.
7. Policies need to be contextualized to the needs and environmental space existing in the Fijian secondary schools. Policies clearly define the rationale, allocated time, guide teachers in pedagogy and assessment methodology in how PE classes are to be implemented in Fijian secondary schools.

8. It is strongly recommended that a consultative process is undertaken to review and develop secondary school PE curriculum that addresses the concerns highlighted and fulfills the purpose and aspirations of the stakeholders. The curriculum shall be in line with the SDG goal for healthy living and wellbeing. Physical Education curriculum shall be designed to promote healthy leaving and sports shall be left on the discretion

of the sporting federations, our schools are concentrating more on sports and neglecting physical education.

9. Teachers should encourage children to participate in team sports where the aim should not be to win at any cost. They promote friendly competition and allow students to collaborate toward a shared objective. Students may develop good communication skills while running, jumping, and playing. Individual exercises might also be included into your program. This is an excellent chance to educate youngsters the fundamentals in a supportive and safe atmosphere, as well as to foster a lifetime interest in these activities. Well organized sports will promote healthy living, confidence and good character of the students

10. Teacher institutions play a vital role in nurturing teachers that can fulfill the needs and aspirations of formulated policies and stakeholder vision. The Ministry of education heritage and arts shall have regular consultation with the universities who produce Physical education teachers. The Ministry must see as the employers that teachers who are employed have got good pedagogy for physical education before, they are posted to schools.

11. There shall be Inservice teacher training on regular basis organised by MOE, Universities, NGO'S for the refresher of the Physical Education teachers, these Inservice training shall focus on the latest developments in exercise science and training for healthy wellbeing.

12. Physical activity levels for all students should become a government priority. Government of the day shall Provide amenities in the environment that benefits everyone's interests, not just the most active. Motivate the least active to move as much as possible.it shall become a national policy to reduce NCD in the country as what is taught in schools must continue to be practiced at homes and villages

13. As from the results of the study it was found that teachers lacked content knowledge, The teacher training universities shall deploy strategies to improve the content knowledge of the teachers and the teacher recruitment agency who conducts the job test

shall do specific test for the physical education teachers. At present it is the same job test for all the teachers who are going to get employed. the benchmark for the test shall be placed at 90 % so that the best teachers are in selected to be in the classroom.

14. The ministry of education and the research unit shall pprovide incentives for teachers to carry out action research on pedagogy of physical education

15. Organise Teacher Education conferences, seminars as platforms for sharing research findings of teachers and university staff on physical education and sports

16. The school administrators with district education office can create school clusters and a teacher network to enable instructors to exchange ideas of content knowledge and pedagogy in physical education and sports .

Suggestions for Further Studies

The present study has highlighted the current status of secondary school physical education teachers Attitude Towards physical education, content knowledge, pedagogy and Teacher Effectiveness of secondary school s physical education and sports Teachers of Fiji. Therefore, suggestions for future research could be done on :

- Effectiveness Primary school teachers in taking physical education and sports in primary schools of Fiji. This will help to see why students are not developed in to the fine motor skills when they join Secondary schools.
- District education office shall provide a platform where the specialist physical education teachers openly share the knowledge with the non-specialist and the non-specialist open up and come up with the challenges face by the tea To conduct action research on different teaching approaches that you help improve teachers Attitude towards physical education, content Knowledge and pedagogy.
- To conduct action research on different teaching approaches that you help improve teachers Attitude towards physical education, content Knowledge and pedagogy
- Primary school teachers content knowledge in physical education comparing the males and the females
- Primary school teachers' pedagogy for taking a practical physical education class

5.07 Conclusion

Physical Education promotes physical activity through which lifestyle diseases such as obesity may be prevented as it is essential for good health. Improved cardiovascular, metabolic, mental, and musculoskeletal well-being are all linked to regular physical exercise and activity. The link between physical exercise and academic success in children and adolescents has recently been the subject of important new studies. Secondary school students should engage in vigorous or moderate-intensity physical exercise for at least 60 minutes each day, according to clinical and public health standards. This research focuses on the role schools may play in encouraging physical activity among students by analysing the attitude, content knowledge, teacher effectiveness and the pedagogy used by the teachers in taking Physical Education class. Excellent Physical Education class is the key for good health. It is practically hard to obtain the 60 minutes of daily physical activity that is health promoting via Physical Education, even with the best Physical Education curriculum. Excellent Physical Education class must include time for teaching activities and concepts that are not always physically oriented. To achieve better standardized test results, political and economic pressures have led to a reduction or elimination of Physical Education curriculum and hence a reduction or elimination of student chances for physical exercise. It is thus critical to emphasize the importance of not just ensuring that all secondary school students take part in an hour physical activity of vigorous or moderate intensity each day, but also implementing additional evidence-informed ways in which the schools might utilize to achieve this goal. The message that a whole-school approach to physical exercise is required must be conveyed to a wide range of stakeholders, including government, state, district, and school officials; teachers; parents; and all others engaged in the health, development, and academic accomplishment of adolescents. The Ministry of Education must emphasize that all Physical Education class be made mandatory for the students. In 1968/69, when Fiji switched to New Zealand School Certificate Examination, schools were warranted to take Physical Education a core subject. The curriculum development officers would visit schools and approve a school to take part in New Zealand school examination only when they found that schools were taking Physical Education with the other subjects on the time table. This has disappeared from the education system in Fiji and more emphasis has been placed on academic subjects. The school administrators and the Ministry of Education ought to know that participation in regular physical activity promotes greater circulatory system, helps to boost focus, and assists children in academic performance. To have a healthy nation the government of the day should have more emphasis on Physical Education and sports in the country. This would promote good health and reduce the number for cases for NCD. The

research has highlighted the need for the specialist teachers to take Physical Education in schools. The Ministry of Education have to hire more Physical Education specialist and mandate that Physical Education shall only be taken by the specialist Physical Education teachers in all secondary schools. These teachers will have good attitude towards Physical Education, will have excellent content knowledge as their qualification will be in Physical Education. The research indicated that the specialist Physical Education teachers are more effective in the classroom despite their qualification as a diploma. The specialist Physical Education teachers were found to be more passionate towards teaching Physical Education and use better pedagogical techniques to motivate and have excellent Physical Education classes.

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